THE LANCET.

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COURSE OF LECTURES
ON THE
PHYSIOLOGY AND PATHOLOGY OF THE BLOOD,
AND
THE OTHER ANIMAL FLUIDS,
DELIVERED IN THE SESSION OF 1839-40,
AT THE
School of Anatomy adjoining St. George's Hospital,

BY HENRY ANCELL, ESQ., SURGEON.

INTRODUCTORY LECTURE.

The Fluids but little attended to in Lectures on Physiology and Medicine.—The principal humoral theories since the origin of rational medicine in Greece.—The doctrines of Hippocrates.—The doctrines of Galen.—Cause of the long-continued prevalence of the Galenic system.—Rise, progress, and opinions of the chemical physicians.—Rise, progress, and opinions of the mechanical physicians.—The mechanics the followers of Leucippus and Democritus; the chemists of Anaxagoras.—Sydenham inclined to the chemical principles of the day.—The chemico-mechanic theory of Boerhaave.—Cullen not so exclusive a solidist as some of his successors.—Hypothesis the besetting sin of all the systems of medicine.—Necessity of paying more attention to the fluids.—Change of medical opinion both in England and on the Continent.—The rational practice of medicine without attention to the humours impossible.—The objects of the Course.

GENTLEMEN:—In the lectures on physiology and pathology delivered in this metropolis the fluids of the human body receive but a small share of attention, for which, I think, the following reason may be correctly assigned. Since the latter end of the last century, when the doctrines of Cullen were adopted, the fluids have been regarded as playing a comparatively unimportant part, subordinate to the solids, in the phenomena of life, and teachers have been unable to comprise more in their lectures than the most important subjects, according to the opinions of the day. Hence, although of late years a few individuals have studied the blood and other animal fluids with the most fruitful results, it is nearly new as a general subject of medical inquiry.

An exception must, however, be made in favour of this school. Dr. Stevens's lectures on the blood were read in this theatre, 1836. In the lectures delivered here by Dr. Wilson, on anatomy and the principles of medicine, as well as in his lectures on materia medica at the College of Physicians, ten years ago, before the discovery of the "pus globule," or the arrangement of the causes of "albuminuria," the blood, and the animal fluids generally, received their due share of attention. These were the only lectures on physiology or medicine, that I am aware of, in which these subjects were not neglected, and Dr. Wilson stood almost alone, as a physician of credit and experience, who advocated the undeniable truth that the living human body is to be regarded as a whole and health and disease studied not only in their relations to the *nervous system* but also to the *blood*. At that time, and even later, nearly all that the student of medicine could obtain from his teachers on the subject of the animal fluids, and their importance in the economy, was to be met with in a few lectures on chemistry, towards the termination of the general course.

When Dr. Cullen overturned the doctrines of Boerhaave, about sixty years after they had been published to the world, he gave as his best and most solid reason for doing so, that a great collection of new facts had been acquired by observation and experiment. Fifty-six years have now elapsed since the publication and general reception of the "First Lines of the Practice of Physic," and I believe no one will doubt that the addition to our knowledge has been beyond all comparison greater during the latter than during the former period. Although no bold and systematic genius has stood prominently forward to inflict the blow, it is evident to every observer that the system of this great man is insidiously crumbling to the dust, and that by the accumulation of new facts and the advance of

science, it bids fair to experience a more complete oblivion than that of its predecessor.

Dr. Cullen very properly objected to the hypothetical humoral pathology, and condemned the almost total neglect of the moving powers of the animal body, in the system of Boerhaave. At the same time he did not deny that the fluids are liable to various morbid changes, upon which diseases may depend. In his doctrine of fever he considered the disease as primarily depending upon changes in the state of the moving powers, but at the same time he admitted that a putrescency of the fluids does really take place in many cases. The force of Cullen's opinions rested in the term *hypothetical*, correctly applied. Although, it must be confessed, that together with the hypotheses he set aside many of the facts appertaining to the fluids; he made an erroneous estimate of other facts of the same class, and upon false facts he constructed theories which were equally untenable with those which he had so triumphantly overthrown. Still, it was his immediate successors, rather than himself, who, in their zealous pursuit of pathological anatomy, localised disease, and taught a doctrine of exclusive solidism, in which no account whatever was taken of the state of the animal fluids in the phenomena of life.

There are many in the profession who by some unaccountable mode of reasoning, think there is something conjectural necessarily connected with the quality of fluid; their *nerves* are shaken by the bare mention of the word *blood*; they imagine that we cannot pay attention to that which constitutes nine-tenths of the living frame without again involving ourselves in the errors of the humoral pathology of the ancients. The following gleanings from history will serve to show these gentlemen that, at all events, we are not in danger of falling into errors identical with those alluded to, and I trust they will contribute to prevent our imbibing others which are analogous. They form a necessary introduction to the subject of the course.

Medicine has been handed down to us directly from Greece, and it is highly probable that during the early ages of that country reason was not much consulted in its practice. It was Pythagoras and his immediate disciples who first engrafted reasoning or philosophy upon the art, and gave existence to physiology. To his school is traced the origin of the belief that four elements, earth, air, fire, and water, compose the body, and that health depends upon an equal mixture of heat, dryness, cold, and moisture, together with sweet, bitter, and some other qualities, which Aristotle afterwards settled and proved, and he introduced the mystical power of numbers. But the philosophers of the school of Crotona were rarely physicians, and to Hippocrates is ascribed the merit of combining philosophy with practice, and of uniting reasoning with experience in one person. After expunging many of the visionary notions with which medicine had become invested, he adopted the four elements and the four qualities of Pythagoras, and he divided the human body into three parts, the *solid*, or that which contains; the *liquid*, or that which is contained; and a general principle which he called *Nature*. To the latter he ascribed a mighty power, divided into numerous faculties, upon which all the operations in the bodies of animals were made to depend. This power operates by attracting whatever is necessary and agreeable, and repelling what is superfluous and hurtful. Besides the four first qualities, Hippocrates attributed to the humours especially, an abundance of others, as sweet, bitter, sour, salt, and insipid. The blood was regarded as a thin, watery liquor, and a thick, reddish lump, and as compounded of four elements; 1st. The red part, or true blood, to which was attributed the redness of different parts, as of the muscles; 2ndly. The white blood, or phlegm, from which the urine, sweat, and other watery liquors, are immediately produced; 3rdly. The yellow bile, which gives the yellow colour to the serum; 4thly. The black bile, which gives the dark colour to the under part of the clot, and composes the blackish fluid ejected by vomiting and stool. All the blood-vessels were called veins, and the most erroneous and confused notions were entertained of their course; the blood was supposed to move in a sort of undulating motion from one extremity of the vessel to the other, and little attention was paid to the pulse. But of the importance which Hippocrates was led by observation to attach to the heart, and of his opinion respecting the vitality of its contents, we may be assured, from the following observation, when speaking of its orifices:—"These are the fountains of human nature, and from hence flow those springs that serve the whole body. These are the streams that give life to man, and when they dry up he dies."

Together with the four primary humours there were four temperaments; if the red blood abound the habit is *sanguine*; if the phlegm be in excess it is *phlegmatic*; the yellow bile produces the *choleric*, and the black bile the *melancholic* dispositions. He held that a disease does not occur without a change in the fluids or solids, or both, and that an error in those things which do not enter into the composition of the body, but yet are necessary to its existence—the *non-naturals*—air, food, drink, motion, rest, sleep, watching, retention, excretion, and the passions, are the occasions of it; he very rarely referred their operation to occult qualities, but imagined that they produce

their effects immediately upon the humours. The proportions of the four elementary humours were not determined, but disease consists in a loss of balance in their quantity, quality, and mixture. The symptoms which follow are the natural effects of the powers of the body; thus, when we take anything that is injurious, but not strong enough to put an end to life, either the stomach or intestines discharge it, or if a part of it get into the blood, we fall into a sweat, or make a great quantity of urine, or bleed at the nose or other parts, or find a swelling somewhere,—all this through the operations of the fluids and solids upon each other, by the powers of Nature. The humours and spirits being the causes of health and sickness, the solids are the subjects of them, being sound or unsound according to their good or ill disposition. Fever was believed to be produced by the introduction of a noxious substance into the blood, and the increased action of the heart was the effort of Nature to get rid of it; and, since an abscess heals quickly after bursting, and a perspiration follows the cold fit of an intermittent, diseases generally were believed to be caused by the introduction of humours which are at first crude, then concocted, and afterwards evacuated,—hence the theory of crudity, coction, and crisis, by means of which Nature is said to make herself mistress, but which requires a certain time to be brought about, as every fruit has a limited time to ripen. The doctrine of crises seems to have been based, in part at least, upon the Pythagorean philosophy. The prognostics of Hippocrates were, in a great measure, founded upon considerations connected with the fluids. In his treatment he laid great stress upon diet; indeed he is regarded as the inventor of dietetics, and he placed great reliance on the powers of Nature. His plan of cure was by contraries, so that evacuation cures diseases of repletion, and repletion those caused by evacuation. The addition of things wanted and the subtraction of things superfluous, was another principle of treatment. We are directed, also, to dilate and close the passages, and to direct the course of the humours, which comprises the principles of derivation and revulsion, by which the fluids are recalled or drawn in a contrary direction. Purges were adapted to the nature of the fluids; thus, hellebore is especially efficacious in purging off redundant atrabilious humours. Bleeding was employed, in small quantities, to empty the vessels, to recall the course of the humours, and to secure a free motion of the blood and spirits. Hypnotics were employed to procure sleep, by calming or giving rest to the blood; fomentations to resolve, or dissipate, or draw out peccant matter; and cataplasms to soften, lenify, or ripen tumours and abscesses. This will serve as an epitome of the humoral doctrines of this great man, whose observations are justly appealed to by every judicious physician of the present day.

Galen incorporated with the system of Hippocrates the philosophy of Aristotle, and gave to the former a more complicated form. Aristotle maintained that there must be a vital principle connected with every living body, to account for motion and organisation. This vital principle, or soul, characterised by faculties, as nutrition, sensation, cogitation, and motion, is the primary source of all the energies of a living body, but subordinate to a higher power, which he calls Nature. In imitation of Plato, who had distributed the faculties into three classes, Galen also had three faculties. The first a ruling, rational, or animal faculty, seated in the head. The second, a vital faculty, in the thorax. The third, which he called natural, placed in the abdomen. To these he gave for instruments, or organs, three spirits, the animal, vital, and natural spirits, which were vaporous exhalations from the blood. The faculties produced three kinds of action, viz., animal, vital, and natural actions. There were subordinate faculties which presided over particular organs. He attributed the same importance to the power of Nature, the doctrine of attraction, the signs of diseases, and the circumstances of crises, as Hippocrates had done. He adopted the four humours and the four cardinal qualities; but one essential difference between his system and the former is that he attributed much less importance to the secondary qualities. According to Galen we enjoy health as long as the faculties are in a state to produce their ordinary actions; but since the animal, vital, and natural spirits emanate from the fluids, health and disease depend primarily upon the latter; although he states, as long as both fluids and solids maintain their symmetry, the faculties upon which the actions depend must be healthy; on the contrary, when the humours or solid parts are deranged or disunited, the vital spirits must be in disorder, and their actions interrupted. The predisposing causes of diseases consist chiefly in a vitiated state of the humours, arising either from a plethora or a cacochemia. A plethora may be either sanguineous, pituitous, bilious, or melancholy. In a cachochemy the humours become more hot, cold, dry, humid, sharp, acrid, mild, or bitter; and this condition also exists when one of the humours of the blood predominates over the rest. The proximate cause of a disease is that which being present the disease is present, being absent the disease is absent. In the case of a pleurisy, for instance, the proximate cause is that portion of fluid which forms a part of the pleura, and which occasions the inflammation of the part; the predisposing cause is the mass of fluid con-

sidered as expanded over the body, or contained in the vessels by which it is carried to the diseased part. In accordance with the Aristotlian philosophy, and contrary to the example of Hippocrates, he dwelt much upon the occult causes of diseases. He also treated very minutely on the pulse, considering it as a particular action of the heart and arteries, which serves to maintain the heat of the body, heat being an action of the vital faculty, and a fever existing when a preternatural heat is generated in the heart. If the heat of the blood is greater than it should be the pulse is greater, and becomes quick and frequent; and if the heat of the blood is diminished the pulse is at first infrequent, and then slow and small. Sometimes the pulse is oppressed by an abundance of humours, or by their corruptions; sometimes it is depressed or arrested by the vehemence or long continuance of the disease, by large evacuations, abstinence, or the passions; at other times it is oppressed and unequal, in consequence of too great a plenitude of blood, or by obstruction from too great a grossness or a glutinous state of the humours. In his treatment he was greatly influenced by two of the maxims of his predecessor, "that a disease ought to be got the better of by that which is contrary to it;" and "that Nature ought to be preserved by something akin to herself." The properties attributed to remedies were the four cardinal qualities in four degrees. Chiccory, for instance, is cold in the first degree, and pepper hot in the fourth, their medical effects depending upon these qualities; and even the secondary qualities, as salt, sweet and bitter, are referred to the primary ones. He practised bleeding more frequently, and is the first author who specifies the quantity of blood to be taken; in one case he took a pound and a half the first day, one pound the second, and half a pound the third; the principles upon which bleeding was employed were the same, viz., derivation, revulsion, and to reduce plethora. Purging, on the other hand, was had recourse to in cachochemia, to evacuate morbid humours. But the fundamental difference between the practice of Hippocrates and that of Galen is, that the former is founded chiefly on experience and observation, and the latter on reasoning. Galen's system comprises the most subtle distinctions and the most intricate ratiocinations, and this explains how it happens that it has sunk into comparative oblivion, and is now rarely quoted by the greatest admirers of the ancients.

Galen's system set all others aside, and maintained undisputed sway over the medical world for more than 1200 years; yet from a few of his immediate successors we may obtain some new or extended views of the "humoral pathology." Ætius contains some interesting remarks on discutients and suppuratives. We are first to suppose the fluids which constitute tumours, contained in their proper vessels. By an obstruction in the capillaries, from a fault in the blood, or from external accident, the humours stagnate, and by a continual afflux distend the vessels, so as to occasion swelling. Discussion is produced—first, by so opening the pores that the redundant matter may be in some measure discharged by perspiration; and, secondly, by alternating and altering the humours, by both outward and inward methods, that they may recover their usual course through the capillaries, which two methods are the adequate means to make a tumour subside; but if the first intention is pursued without the second, according to this author, the thin matters fly off, and the remainder grows stiffer, fixes the obstruction, and thickens the membranes. Hence, to fulfil the first of these indications, the employment of emollients, fomentations, and oily and spirituous applications, and the efficacy of oil of turpentine and mercury to fulfil the second indication, using at the same time all inward means for the purpose of emptying the vessels and promoting discussion. When we rarefy and attract the humours, and at the same time obstruct the pores, we put nature upon a different effort, called suppuration; to effect this we must leave no vent through the skin, and at the same time produce so great a distention that the humours, when brought to a state of digestion, and extravasated, may burst the vessels, and appear in the form of pus, for which purpose pitch, wax, resin, and fat are to be applied. This doctrine was applied to fevers and internal diseases. Hippocrates had laid considerable stress upon dilutions, and some of the followers of Galen carried his views to a great extent. Water was considered the vehicle of the aliment; it insinuates itself, and imparts coolness and heat, and therefore, although it may be no nourishment, it is the means of nourishing everything; dilution was held to have the greatest effect in dangerous diseases, even without the help of medicine; and some of the writers of this period lay it down as a principle in the treatment of fever to do everything that will increase humidity. Steel was considered forcible in attenuating and removing obstructions, acting also by the gravity of its particles as a deobstruent. Alexander, when speaking of purgatives, remarks, that it is not the intention in chronic diseases and phlegmatic constitutions, that the medicine should be carried immediately through the bowels, but that it should be detained in the body, and conveyed into the remote parts, and there attenuate and correct the humours, open the passages, remove the obstructions of the nerves, and make way for the motions of the spirits. I omitted to observe that Oribasius laid great stress upon corroborants to improve the circulation and

restore the solid parts to their natural tone. Issues, caustics, and blisters were much employed, and their efficacy referred to the quantity of the discharge from the parts to which they were applied. Nemesius seems to have entertained original notions respecting the bile; he found out that it helps digestion, and contributes to the expulsion of the fæces; and he considered that it is made for the purpose of purging the blood.

Yet the system of Galen remained unimpaired until the period of the discovery of the art of printing and the Reformation, notwithstanding the zeal and industry of the Saracens and the Arabians, and the introduction of chemical substances into the materia medica. It is worthy of remark that Rhazes, in the first description which is met with of the small-pox, refers it to an innate contagion or ferment of the blood, like that of must, which contagion purifies itself, by throwing off the peccant matter at the glands of the skin. Linacre translated Galen's works, in part, into Latin, and Caius commented upon them, these being the two first Presidents of the College of Physicians in London. His opinions prevailed generally during the sixteenth and first half of the seventeenth centuries, not only in this country, but all over Europe; and the earliest innovations made upon them were by the chemists. The secret of their uninterrupted ascendancy is this: The maxims of Hippocrates were completely interwoven, in Galen's system, with the philosophy of Aristotle. Aristotle was all but oracular for more than 1000 years; his authority was the test of truth, and to dissent from him was to bring down the anathemas of the church. That which has been said by a learned writer of philosophy may be applied to medicine:—"Ignorance was cloaked in learned subtleties, controversies about words or things of no moment, or things above the attainment of the human faculties, were interminable, and no discovery was made of any use to mankind, until that spirit of inquiry sprung up which gave men the courage to doubt the dogmas of Aristotle and the decrees of Popes,"—with whose infallibility that of Galen was destroyed.

It has already been said that the first innovations upon the Galenic system were made by the chemists. The Arabians had introduced many chemical remedies into practice; but it is, perhaps, to Basil Valentine, who attributed medicinal virtues to everything procured from antimony, and wrote a book extolling its preparations, that we ought to attribute the rise of the *chemical physicians*. He seems, also, to have given origin to the doctrine of the three elements, salt, sulphur, and mercury, to which all matter was supposed to be reducible. He was the first who considered that digestion depends upon an acid menstruum, and from him it is most probable that Paracelsus obtained the greater part of his knowledge of medical chemistry. But the overthrow of the system of Galen at this time is mainly attributable to Paracelsus. This remarkable man seems to have predetermined to employ all his energies to ruin it; and, although empirics in their practice, he and his followers succeeded in effecting a total revolution in medicine, by the substitution of the Chemical for the Galenical school. He ridiculed the philosophy of Aristotle, and opened the eyes of physicians to the absurdity of the doctrine of the four primary qualities of bodies, substituting the three elements of Basil Valentine. The circumstances which contributed most to his success were, the opinion of the alchemists which now prevailed very generally, that all diseases of the human body may be cured, perfect health restored, and life prolonged to any number of years, by one universal chemical medicine; together with the knowledge which he had obtained of the efficacy of mercury in syphilis, which disease had just made its appearance in Europe.

What Paracelsus had begun Van Helmont seems to have completed. He reduced the art of physic to principles of chemistry. He clearly proved the Pythagorean doctrine of the four elements, and four qualities, with the Galenic subtleties of four degrees, and the method of cure by tempering these degrees, to be false. He substituted his Archæus for the principle of life, ascribing to it both knowledge and understanding, so that when hostile matter presents itself in any part of the living body, it rises into a fervour; giving rise to the origin of the theory of fermentation. All the phenomena of health and sickness now turned upon the chemical state of the fluids of the body. Sylvius, adopting Van Helmont's views, introduced a chemical hypothesis, which, under one modification or another, has had a remarkable influence in medicine ever since. He accounted for every morbid action that takes place in the animal economy upon the supposition of its being the result of chemical changes from the preponderance of an acid or an alkali, upon the neutralisation of which he imagined every cure to depend. Influenced by this reasoning the symptoms of diseases and the observation of phenomena were totally disregarded; ammonia, absorbent earths and cordials, or acids and refrigerants, were employed in every case according as the acid or the alkali was supposed to predominate in the system. After the propagation of these views chemical doctrines spread with the most astonishing rapidity over Europe. Digestion was accounted for by some on the principle of fermentation; by others it was made identical with putrefaction, and ultimately it was referred to chemical solution. Thus, in 1681, Greer remarks,—"By the joint assistance of the glandulous and nerv-

ous membranes, the business of chylification is performed; the secretion from the blood being supplied by the former as an animal corrosive preparing; and the excrement of the nerves by the latter, as an animal ferment, perfecting the work." Fever, according to the chemists, is produced by an effervescence or ebullition in the blood. Boyle, under the influence of Lord Bacon's philosophy, wrote an "Essay on Humane Blood," in which he insists much upon experiment, and regrets the little that had been done in that way, remarking that he could comprise all that was then known in one or two pages, and that "to mind the solid parts of the body, and overlook inquiry into the fluids, and especially the blood, were little less improper in a physician than it would be in a vintner to be very solicitous about the structure of his cask, and neglect the consideration of the wine contained in it."

The progress of chemistry from this time is well known. New elements were discovered, new facts were ascertained respecting the process of respiration, and the animal secretions, and although many revolutions have taken place in the theory of medical chemistry, it maintains perhaps more than its legitimate influence in the eclectic practice of the present day.

The discoveries which were made in anatomy during the 16th century, led, at the commencement of the 17th, to that of the circulation of the blood by our immortal countryman Harvey, which threw an entirely new light upon the animal economy, and destroyed, in one day, the greater part of the theories of the ancients. The discovery of the thoracic duct having been made previously, it was observed by Gassendi that these are the two poles upon which all physic for the future ought to turn. To these discoveries must be added that of the lacteals; the lymphatics; and the cystic and pancreatic ducts; with the medicina statica of Sanctorius, first calling the attention of physicians to the cutaneous and pulmonary transpirations, and we have an epoch dividing the history of the humoral pathology into two periods, which, although the changes of opinion were progressive and partial, may not improperly be called ancient and modern humoralism.

The Epicurean philosophy, as modified by Gassendi, and the Cartesian system, took its origin about the period of the discovery of the circulation of the blood, and flourished during the seventeenth century. Des Cartes has the honour accorded him of having first drawn a distinct line between the material and the intellectual worlds, which, in the old systems, were so blended together that it is impossible to say where the one ends and the other begins; but he retarded the progress of medicine by proving, as his followers imagined, that all the phenomena of vegetative life, as well as sensation, are purely the effects of mechanical structure. According to the former of these systems, which explains all the operations of nature by the figure, size, and motion of the particles or corpuscles of matter, the particles of the different elements of the blood have different mathematical figures, as spheres, cubes, prisms, pyramids which circulate in the mass of the blood, and adapt themselves to various channels and orifices, of a round, square, oval, triangular, quadrangular, or oblong figure, for the purposes of life. The disciples of this school are properly called *mechanical physicians*. According to them the human body is a machine, composed of solids and fluids; health consists in having a free and undisturbed circulation through the vessels, and sickness in motion being prevented in some part or other. The circulation, respiration, digestion, sensation, and volition, are produced by no other causes but such as produce the motions of a watch, or a steam engine, and the effects which take place in such a machine can only be explained from its structure, and on mechanic, hydrostatic, and hydraulic principles. Many of the most eminent men of the day embraced the mechanical theory of medicine, but they rejected the unknown velocity and the corpuscular figure of bodies, holding that the same method must be observed in arriving at a knowledge of the causes and cure of diseases, as in the pursuit of natural philosophy; that is to say, to assume nothing that is not evident to the senses, and to neglect nothing that has appeared, though ever so minute, applying mathematical reasoning to the phenomena. About this time Malpighi discovered the coloured corpuscles of the blood, by the aid of the microscope, and Leuwenhoeck believing them to be spherical, and wishing to adapt the discovery to the Cartesian philosophy, imagined the red corpuscles, or largest particles, to have a fixed magnitude. He called them globules of the first order, and imagined them to be composed each of six smaller globules of the second order. He also saw in the chyle and blood a great many particles which he believed to be six times smaller than these globules of the second order, and thirty-six times smaller than the largest red particles; this constituted them globules of the third order. There are also, according to this author, vessels so small that none of these last can pass, consequently there must be globules of a fourth, fifth, and even of a sixth order; the globules of the higher orders being liable to lose their contexture when the circulation is stopped, and to be broken into those of a smaller kind. I have described this theory of Leuwenhoeck, because it was afterwards adopted by Boerhaave in his explanations of diseases. The mechanical pathology was for the most part humoral. It was frequently combined with chemical views in the same

individual. By the pure mechanists all the phenomena of digestion were accounted for by trituration. Borelli seems to have been the first practitioner who adopted it. Not only the functions of life and the processes of disease, but also the effects of medicines, were believed to be capable of explanation on mechanical principles. Bellini, Pitcairn, Mead, in the early part of his career, Friend, Barry, and Cheyne, are some of the most respectable names belonging to this sect.

Throughout the writings of many of the mechanical and chemical physicians of this age, and even to our own time, may be recognised the atomic doctrines of Leucippus and Democritus, which was the most definite of the physical sciences of the ancients, and the *Homoiomeria* of Anaxagoras, or doctrine of homogeneous particles; the former pointing to the corpuscular, or mechanical theory, and the latter to chemical affinity; and the most enthusiastic of either sect, like the philosophers of the present continental physico-chemical school, have ever erred in making the unknown causes of organisation, and the actions of living beings, to be merely unknown affinities, or corpuscular congruities, exerted among the minute particles of matter. In the ancient humoral pathology, the phenomena of health and disease were attributed to an agent in the system, which they called nature. Since the downfal of the Galenic system, we have ever had one sect who have discarded nature in any of her multifarious shapes from their reasonings, and another which has recognised the vital principle. Of the latter, some, like Stahl and his followers, referred the power of nature, or the actions of the vital principle, to the rational soul, acting on, and frequently independently of, the body, and purely by its own intelligence.

I have described the various theories to which medical facts have been referred, from the dawn of rational medicine in the disciples of Pythagoras, to the time of the celebrated Herman Boerhaave, the last of the systematic humoral pathologists. There was, doubtless, throughout this long period, almost to the present day, a class of practitioners to whom the appellation of empirics *de jure*, and perhaps a second class, with too little industry for study and too little judgment for observation, to whom that of empirics *de facto*, might be applied. There was also a third class, the pupils of Nature and Hippocrates, the patient and profound spectators of disease at the bedside of suffering humanity, whose minds were devoted to just observations and profitable experience: to this last belongs the illustrious Sydenham. But we should be in error to conclude that Sydenham had no theory; he criticised the mechanical, and inclined to the chemical principles then in vogue, and was strictly a humoral pathologist, believing that acute disease is a vigorous effort of nature to throw off morbific matter; that its causes are particles of air which disagree with the juices, insinuate themselves into the body, mix with the blood, and taint the whole frame; or different kinds of fermentation and putrefaction of the humours detained too long in the body, for want of its being able to digest and discharge them; and that the symptoms are efforts of nature to expel the pecant matter, which would otherwise destroy the fabric. He illustrated his theory as follows:—"What is the *plague* but a complication of symptoms to throw out the morbific particles through the proper emunctories by way of external abscess, or other eruptions? What is the *gout*, but the contrivance of nature to purify the blood of aged persons? and, as Hippocrates phrases it, to purge the recesses of the body?" This will serve to show that Sydenham returned to the "ancient humoral pathology."

The system of Boerhaave, which was considered the most concise and best that had ever before appeared, was more generally received than any since the time of Galen; it comprised all that he believed to be true in the works of both ancient and modern physicians, and all that was applicable to medicine in chemistry and mechanics. His opinions respecting the human body in health may be gathered from the following sentence:—"Let anatomy faithfully describe the parts and structure of the body; let the mechanic, by his particular science, examine the solids, whilst hydrostatics helps us to the laws of fluids in general; and the actions of them, as they move through given canals, are explained to us by that beautiful science—hydraulics; and lastly, let the chemist add to all these whatever his art, when fairly and carefully applied, has been able to discover; and then, if I am not mistaken, we shall have a complete account of the physiological part of physic." Chemistry performed a most important part in the animal economy, according to the system of Boerhaave. The first elements of the solid parts consist of an earth, an oily glutinous matter, and water. We should have been entirely ignorant of the origin of this oil, earth, water, and all the humours of the body, from the elements which it receives, as well as of the parts, kinds, changes, and powers observed in these humours, without the aid of chemistry.

In pathology, the causes, modes, and effects of the degeneration of the humours; the vitiation of the juices when they move too slowly, or are at perfect rest in their vessels, or run out of them and stagnate in cavities; the alterations that the oils, salts, spirits, and earth undergo, which are mixed with our fluids, when they circulate in the arteries with too great rapidity; what acrimony there is in the body; how many

sorts of it there are, when it had its origin, and what are its effects; how the constituent parts of the blood are compacted together, and by what means they are again resolved; the nature of pus, ichor, sanies, virulent and putrid fluids; gangrene and sphacelus, and even the diseases of the bones; all these circumstances in the living body are to be explained according to the humoral system of Boerhaave, by the laws and doctrines of chemistry.

Boerhaave remarked, that the labours of the Greeks were confined to the examination of those things only which spontaneously presented themselves, and we cannot properly understand their doctrines without the aid of modern chemistry. This he exemplifies with respect to the pulse. The ancients knew that a frequent pulse is an indication of a fever, and taught that the number of strokes, in a given time, is a measure of its intensity; by it they could tell that the native heat is increased, the radical moisture deranged, and life endangered. Harvey informed us that the quality of the pulse is owing to the more frequent reception and expulsion of the vital blood; but by modern chemistry we have learned, that this increase of heat by the celerity of the pulse, dissipates the more fluid parts of the humours, and that the remainder are *inspissated*; that the oils also will be dissolved and mixed with the blood, and by attrition during their circulation, will become acrid, volatile and putrid, and pressing against the vessels of the brain will disturb it.

Availing himself of the opinions of the chemists again, Boerhaave holds that the salts of the humours lose their natural inaptitude to motion, and become almost volatile; from an innocent mild disposition, they grow acrimonious, and change their soft sopanaceous quality into a fiery or corrosive one, and even into an alkali. Morbid qualities of the secretions, show the morbid condition of the blood at the time, and, hence, discover the intimate disorders of the system.

He adopted to the full extent the opinions of Leuwenhoeck, respecting the form and composition of the blood corpuscles, and he availed himself of them to explain many of those diseases which arise from an *obstruction*. Hence, probably, his doctrine of *error loci*; the parts of a fluid become unable to pass when a corpuscule rushes into a dilated mouth at the basis of a conical canal, or when the bulk of the corpuscle passing, is greater than the capacity of the vessel, owing to a change in its figure, or size, or the agglutination of several corpuscules into a mass; and these effects may be produced by rest, cold, heat; chemical substances as acids, spirits, absorbents, substances that will coagulate by viscosity and oiliness. All diseases are of the solids, or fluids, or both. A fundamental doctrine respecting the diseases of the simple solids is that of laxity and rigidity. He regards the humours either as crude or assimilated, and follows to a great extent the opinions of Sylvius respecting *acid* and *alkali*. The fluids in the stomach may assume an acid, alkaline, oleose or glutinous quality, the latter constituting the *glutinosum spontaneum*; either of these may first affect the blood, and, ultimately, all the humours. Many diseases arise from too great or too little motion of the circulating fluids, or from their stagnation or extravasation. An obstruction, any how produced, may prove a cause of inflammation, and the buffy coat of the blood consisted of *phlegma calidum*. The cold stage of fever depends upon viscidity of the blood, stagnating in the extreme vessels. By nature is meant, according to Boerhaave and his commentator, the aggregate of all the physical conditions wherein life consists, and, accordingly, less reliance was placed in her powers by them, than by many of their predecessors. Of this system it was said, "It will probably stand the test of all succeeding ages," and it differed from those which preceded it, by its author having spoken with more precision of the morbid conditions of the fluids.

In the whole of the preceding history, the phenomena of health and disease turn almost entirely upon the state of the fluids of the body; scarcely anything has been said respecting the nervous system. I have lastly, in a few sentences, to describe the theory of diseases, which so rapidly and so completely overthrew all preceding systems, that the works of their authors have been, for the most part, cast into a perfect oblivion. Hippocrates knew little about the nerves, having confounded them with tendons. Galen was better acquainted with their anatomy and uses, and both recognised an animal spirit connected with them. This animal spirit, under Newton and Des Cartes, became an ethereal fluid, secreted from the brain; a series of vibrations, under Robinson; and a nervous fluid thrown into vibration, by Hartley. These theories have continued ever since. Many anatomical discoveries were made respecting the brain and nerves in the seventeenth century. Dr. Willis published a work on the Pathology of the Brain and Nerves, in 1667; but Baglivi seems to have been the first who made a regular attack upon the humoral pathology, and maintained that diseases more frequently originate in the solids than in the fluids, and that any change in the latter must be regarded as an effect and not a cause. Willis's work is supposed to have laid the foundation for Hoffman's doctrine, that atony and spasm in the solids, and the state of the primary moving powers, will better account for diseases than a vitiation of the humours. These circumstances, with a work published by Gaubius on the *soli-*

dum vivens, and Haller's experiments on irritability and sensibility; together with the manifest imperfections of the Boerhaavian system, seem to have been the chief causes for the trial of a new system by Dr. Cullen, and also to have furnished him with his first materials. I scarcely need say much in explanation of this system, since it is known to almost every student. Cullen would scarcely allow that the fluids have anything to do with the temperaments of mankind. He objects to the then prevailing theory of digestion by acid and alkali, pleading our ignorance of the animal fluids and the imperfections of our doctrine respecting their states and varying conditions. He asserts that the state of the simple solid is, upon few occasions, actually changed in diseases, and that, in ninety-nine cases out of a hundred, any change that takes place depends on the state of the *solidum vivens*, and he considered the great value of morbid anatomy to be in the discovery of proximate causes. The phenomena of diseases are taken to depend upon the motions and moving powers of the animal economy, and the remote causes to act primarily on the nervous system. The remote causes of fever, for instance, act directly upon the nerves, through which they diminish the energy of the brain, and thereby produce a debility of the whole system, and this debility proves an indirect stimulus to the sanguiferous system: this doctrine of fever is purely hypothetical. Inflammation consists in a spasm of the extreme vessels. This may be caused by an increased flow of blood into a part, which necessarily proves a stimulus to its vessels, and to relieve their congestion the power of nature increases the action by the formation of a spasm in their extremities. When stimuli are applied directly, they are supposed to produce the spasm. The inflammation of a part may be communicated to the whole system, constituting the *phlogistic diathesis*, which consists in the increased tone or contractility, or increased contraction, of the muscular fibres of the whole arterial system. The cure of diseases is founded on a knowledge of their proximate causes; thus the principle of cure, both in fever and inflammation, is in a great part to take off the spasm of the extreme vessels.

In all the systems of physic, without exception, hypothesis is the besetting sin, and these, in the words of a writer I have quoted before, "invented by men to account for the works of God, may have a decent and plausible appearance, but when we come to be more enlightened they will always appear ridiculous and childish. Until the wisdom of men bears some proportion to the wisdom of God, their attempts to find out the structure of his works by the force of their genius will be vain." Of all the fathers of medicine Hippocrates and Sydenham are the most exempt from it. There is also the least of system in the works they have bequeathed their posterity. I have been induced to place this detail before you at the commencement of a course of lectures on the fluids for several reasons.

Interwoven with these hypotheses are all the facts, observations, and general principles of medicine which have been handed down to us from the earliest ages. There can be no doubt that facts themselves have been frequently sifted in their transfer from one system to another, so as to retain those only which are in accordance with its particular dogmas; and, in order to estimate the value of any new medical fact, so as to perceive its agreement or disagreement with those which have been ascertained before, we must compare it, not with one, but with the whole of these systems. In order to discriminate between truth, which is eternal, and conjecture, which is like a transient vision, we must know something respecting the opinions and objects of the writer; the sketch I have given is necessarily most imperfect, but I trust it contains as much information as could be well comprised within a lecture. It has been the fashion of late years to neglect the history of our science, but so far am I from abetting this that I would say to the student, When you have fulfilled the prescribed modicum of learning, passed the ordeal in Lincoln's-inn, and recruited your health and spirits, study the annals of medicine and philosophy, which are the annals of mankind. Apart from its intrinsic interest, without having done so, you cannot duly appreciate a single chapter of the multifarious works of modern authors, and you will be liable to deception and delusion in every step of your future career.

You will be convinced that the time is come when it behoves us to pay more attention than heretofore to the fluids of the animal economy, by the unprecedented number of discoveries which have been made during the present century, and are likely to influence the theory and practice of physic. I can only hint upon this occasion at the progress of chemistry in general, and of animal chemistry in particular; at the numerous physiological experiments on the blood and secretions, by Drs. Davy, Bostock, Babington, Messrs. Thackrah, Prater, Müller, Magendie, Denis, Lecanu, Provost, Dumas, and many others; at the fruitful results of the new method of patient microscopical investigation of the fluids, not only as regards the physical forms of their component particles, but even their more remote vital effects, by Treviranus, Schultz, Gulliver, &c. I may remind you also of the practical works by Stevens, Prout, Bright, Ferguson, O'Shaughnessy, and other modern physicians, of our own country. I could quote innumerable passages which I have met with

incidentally in the works of recent authors, bearing upon the same point. Dr. Roupell, of St. Bartholomew's Hospital, in the Croonian lecture, as far back as 1832, states, "it is to a more exact acquaintance with the chemical changes of the *fluids* in diseases that we are chiefly to look for the future advancement of physic as a science." Dr. Burrows brought forward a number of most interesting facts relating to the pathology of the *humours* in his Gulstonian lectures. Dr. Hughes, of Guy's Hospital, remarks, "It is not improbable that we are slowly reverting to a modified '*humoral pathology*;' and Dr. Watson, of the Middlesex, has referred purpura and scurvy to a morbid state of the *blood* itself. Andral, Velpeau, De Lens, Chomel, Roche, Hoffman, in fact, the most eminent French and German physicians, have declared themselves in favour of a limited humoralism.

I cannot refrain from quoting a passage from a most excellent book on the Analysis of the Blood and Urine, by Dr. G. O. Rees:—"The philosophic revival of a humoral pathology," says Dr. Rees, "bids fair to render the analysis of diseased blood one of the most useful adjuncts to our medical knowledge;" and he recommends the attention of practitioners to it, if "only as a shield against the exposure which might occur from the more perfect knowledge of a rising generation." The altered tone of reviewers in the criticisms of the periodical press will confirm these quotations. Under all the circumstances I feel no hesitation in stating my belief that the investigations of the present day are leading rapidly onward to an entirely new epoch in the history of medicine; and I have directed attention to ancient opinions, that by studying them we may be better able to comprehend novel views, and that they may serve as beacons to enable us to steer clear of the rocks against which others have split.

Hitherto, as far back as my memory will carry me, those who have inclined to accord a considerable share of importance to the fluids of the animal economy, have had it imputed to them as a fault. I may assert, without fear of contradiction, that to a great extent every practitioner of rational medicine, from the apothecary to the President of the College of Physicians, is a humoral pathologist, not trusting to his erring judgment alone to estimate powers, of whose nature we are totally ignorant, acting by laws which we at present only guess at. While exclusive solidism was the physiology of the cabinet and the lecture-room, every practical man must have been in part a humoralist.

The practice of rational medicine is impossible without attention to the humours. Bichat remarked, "the humoral pathology was, no doubt, carried too far, but it is founded in truth." Moreover, the universality of blood, cellular membrane, and nerve is too frequently forgotten. I heard Dr. Wilson quoted a day or two ago, by one of his pupils, somewhat to the following effect:—"Every fluid is in part solid, and the greater part of every solid is fluid." The living human system constitutes one great whole, indivisible in the state of health as well as in disease, and the distinction into solids and fluids is by no means just, since it ceases to exist in the ultimate structure of tissues, where the most important vital phenomena take place. It should be further remembered that solid and fluid are only relative terms, the same substance assuming either state according to an ultimate, inappreciable variation of temperature. Blood has the same proximate constituents as the solids, and was characterised by Bordeu as "fluid flesh."

My object in this course of lectures is to bring into one focus all that is known respecting the fluids of the animal economy. The circumstance which induced me to engage in the undertaking was this:—I projected and commenced some original investigations upon the blood, but I soon found that there was so much information upon the subject scattered abroad, that before I could proceed with advantage I must collect it together. In doing this for my own use and guidance, I thought that the matter could not be unacceptable to my fellow-labourers in the same vineyard, but more especially that it would be useful to the student of medicine. We are, then, about to study the animal fluids as preparatory and auxiliary to the study of the phenomena of life. My position corresponds with that of the teacher of anatomy. The anatomist places the more solid remnant of that which was once a living being, before you, you contemplate it profoundly; treasure the facts in your memory; and employ them in your meditation on the same being, ere the immortal part is fled. We now call your attention to the more fluid constituents, in the firm conviction that the knowledge which a beneficent Creator has permitted us to acquire of the most intricate and wonderful of his works, must ever be partial, without the reunion of the two.

ON THE

ESSENTIAL ANATOMICAL CHARACTERS OF YELLOW FEVER.

BY M. LOUIS.

THE consideration of yellow fever has hitherto been confined almost exclusively to the question of its contagious or non-contagious character. But however important

this point may be, there are others which claim the attention of the physician, and amongst them I consider as being the most interesting the point which I propose to investigate in the following article.

It were superfluous to dwell on the necessity which exists of making ourselves perfectly acquainted, in all diseases, with the organic lesions discoverable after death. This is sufficiently proved by the errors into which the practitioner is inevitably drawn when he neglects or forsakes the guide of pathological anatomy. But an acquaintance with the pathological characters of disease is still more necessary when we investigate the nature of any epidemic malady. An individual dies, for example, at a moment when the explosion of some dangerous epidemic disorder is expected; the symptoms and progress of the disease have not been observed with sufficient accuracy to determine its nature; the public mind is alarmed; the health of the community is perhaps at stake. In such a case pathological anatomy comes to our assistance and decides the question. Were it sufficiently understood we would avoid many a fatal error.

I have seen, more than once, cases of typhus mistaken for yellow fever, yet an acquaintance with their anatomical characters would easily have prevented such a deplorable mistake.

These considerations have induced me to publish the result of the researches which I made at Gibraltar during the epidemic yellow fever of 1829. Many of the facts are, doubtless, already known to medical men, but the present seemed to be a fitting opportunity for giving them further publicity.

State of the Liver.

The liver was the only organ which constantly presented a particular pathological condition. This condition is not observable in any other disease, and must, therefore, be looked upon as constituting the anatomical character of yellow fever. It consists simply in a remarkable dryness of the organ accompanied by an alteration of colour. In some rare cases indeed the liver presented other changes, but these were of the same character as the lesions which we occasionally find in other febrile affections.

The *volume* of the liver was normal, except in two cases,* where it seemed to be slightly enlarged. The consistency was moderately increased in three cases; in five others, diminished.

The cohesion of the liver, or the resistance which offered to a cutting instrument was augmented in five cases, and diminished in an equal number. It is evident that the lesions just mentioned were too rare, of too opposite a nature, and too slight, to be considered otherwise than unimportant complications.

* The number of subjects examined was thirty.

The alteration of *colour*, which was extremely manifest, existed in every case, without exception, and although it now and then presented a few varieties, it was easy to perceive that it was at bottom the same alteration. It occupied the whole extent of the organ in every case except three, which shall presently be noticed, and in which it was confined to a particular portion. The change consisted in a blanching or loss of the natural colour, the liver sometimes assuming the hue of fresh butter, or straw; sometimes presenting a yellowish tint, like gamboge or mustard, at others an orange one. The absence of colour was not exactly carried to the same degree throughout all points of the liver; it was more marked and homogeneous in the middle than in the great lobe. In some rare cases the organ was found speckled throughout with different coloured points, and in one, which was examined six hours after death, the yellow and green points were mixed in a remarkable manner. In three cases, already alluded to, the great lobe of the liver preserved its natural colour, either through the tissue, or along the blunted margin. Hence it seems probable that the change of colour, which certainly differs from anything that exists in other diseases, commenced in the middle lobe, and thence extended to the other portions of the organ. We may also conclude that before it became uniform, the yellow colour existed in patches throughout different portions of the organ.

In addition to the lesion now described there was a remarkable *paleness of the blood of the liver*. The organ seemed to be totally deprived of its blood, and in some cases the sliced portions of the left lobe presented a perfectly dry and arid appearance. This pathological character was quite different from the fatty degeneration of the liver, which is always accompanied by softening, for in many cases the consistence of the organ was augmented. This pale and anemic state of the liver is the more remarkable that no viscus presented an analogous change, while several other organs (the lungs, stomach, &c.), were gorged with blood. What is the nature of this alteration? It seems to be impossible, in the present state of our knowledge to say, but we may rest assured that it is not an effect of inflammation. What is its cause? This second point is equally obscure. Hæmorrhage from the bowels could not have been the cause, for the alteration of the liver existed without it; nor did it depend on inflammation of the stomach, for the same reason. Inquiry was made whether the lesion corresponded with any particular affection of the duodenum, but this, also, was found not to be the case.

From the above reasons I am inclined to believe that the alteration of the liver now pointed out is the anatomical character of yellow fever; and it is peculiarly worthy of

notice, because were the stomach free from dark-coloured matter there is no other sign by which the dead body of a yellow fever patient could be distinguished from those of persons cut off by various acute diseases.

The following case will serve as an illustration. It is that of a child seven years of age, who died in the Naval Hospital. The symptoms had not been observed during life.

Body examined 22 hours after Death.

Body moderately fat; skin of a deep yellow colour all over; muscles not very stiff.

Head.—Traces of infiltration underneath the arachnoid; pia mater slightly injected; cortical substance of the brain of a lake-rose colour; medullary substance moderately injected; half a spoonful of serum in each of the lateral ventricles. Cerebellum and spinal marrow normal.

Chest.—Pericardium and heart healthy; no effusion in the cavity of the pleura; lungs of a rose colour, somewhat congested inferiorly, but otherwise healthy.

Abdomen.—No effusion in the cavity of the peritoneum. Stomach somewhat voluminous, and presenting a number of folds; the mucous membrane of a healthy consistence and colour, except near the cardiac orifice, where there were several red spots; duodenum normal. The small intestines contained a quantity of mucus; the internal membrane of the intestine apparently healthy. The *cohesion* and *consistence* of the liver were augmented; it was of a light yellow colour, and the middle lobe was paler than the great lobe; the latter presented several patches of a light rose colour, which passed into a still lighter tint in different points.

Gall-bladder and *biliary ducts* perfectly healthy.

The *urinary bladder* contained a large quantity of urine, and ascended above the pubis four inches.

Kidneys, *spleen*, and *pancreas* normal.

Of what disease did the patient die? We were compelled to attribute his death to the epidemic fever which prevailed, first, because the body presented no trace of any other disease; and, secondly, because two of the chief lesions which exist in yellow fever, viz., the peculiar colour of the liver, and the yellow tint of the skin were here present.

State of the Gall-bladder.

Having explained the changes which take place in the colour and appearance of the liver, we have now to examine the condition of the biliary canal and bile in yellow fever. From the anemic state of the secreting organ we would naturally conclude that the bile is deficient in quantity. This was apparently the case; there was but a very small quantity in the stomach and duodenum, while the gall-bladder contained much less bile than is usually found after acute disorders, especially typhus fever, in which disease that fluid is commonly abundant, and of a pale colour. In all cases the biliary canals were healthy, and their lining membrane in a normal state. Hence it appears that, in yellow fever, as in acute diseases of our own climate, a general jaundice may prevail, without the existence of any obstacle to the free flow of bile through the hepatic canals.

If I wished to *demonstrate* that the alterations of the liver which I have just described were peculiar to yellow fever, I should complete my task by giving a detailed account of all the other organs in the thirty subjects examined by me. But this would extend my present communication much further than I had intended. Let it suffice to say that the pathological changes discovered in the other organs were analogous to what we find in patients cut off by other acute diseases; that such morbid appearances were rare; and that even during the prevalence of the epidemic all diseases of a different nature preserved their differential anatomical characters. Thus, for example, in two cases of typhoid fever, mistaken for yellow fever, the ulceration of Peyer's glands, and the absence of the peculiar state of the liver now described, removed all doubt which had been entertained during life respecting the nature of the disease.—*Arch. de Med.*, September, 1839.

ON THE

COMPARATIVE NUMBER

OF THE

INSANE IN THE SOCIETY OF FRIENDS.

To the Editor of THE LANCET.

SIR:—In Dr. Prichard's work on Insanity, published in 1835, when treating of the moral causes of insanity, he adverts to the number of insane in the Society of Friends, as compared with the numbers in the other classes of society, we find the following statement:*—

"It seems, then, that religious insanity, so termed, is a disorder from which the Society of Friends are in a great measure exempt. With respect to the more general question, whether insanity of any kind prevails among the Quakers to a great or to a comparatively small extent, those writers who have touched upon the subject have been divided in opinion. Dr. Haslam says, 'that it is very rare among the members of that Society.' Dr. Burrows thinks it very frequent among them, and he accounts for the fact by another supposition, viz., 'that their marriages are confined to the families

* Page 198.

of their own Society, and therefore within a very limited circle.'

"With respect to the first point, which only is relevant to my present purpose, Mr. Tuke has furnished me with some data which are highly interesting. He says that 'the number of inmates of the Retreat, who are members of the Religious Society of Friends, has of late years been usually about sixty-four. The total number of Friends in England and Scotland does not, as he believes, exceed 22 or 23,000.' The mean of these sums, divided by the number of patients actually in the Retreat, gives 2 38-45ths, or somewhat less than 3 in 1000, which is a very high proportion, and considerably above that which is supposed to obtain in the general population of this and other countries.

"But there are circumstances which render it difficult to believe that such a comparative result is correct, and which seem to lead us almost inevitably to an opposite conclusion, or at least to show that some other considerations must be introduced in order to explain facts which turn out so contrary to all expectation from the known circumstances of the case. We have seen that the cases of 'religious madness,' so termed, are so few in the Retreat, that the community to which that asylum belongs, may be considered as exempted, in a great measure, from that modification of insanity. But the same observation may be made with reference to several of the most prevalent causes of mental derangement. Mr. Tuke informs me that 'not more than two cases of disease, apparently connected with intemperance in drinking, have occurred in the Retreat among the members of the Society since the year 1811.' This is well known to be in many asylums a very productive cause. Extreme poverty, and distress from actual want, form a large article in the tables of cases given by M. Esquirol and others; and from this cause of madness the Quakers are likewise protected by their habits and institutions. Mr. Tuke says, 'We have had a few cases attributed to disappointment of the affections, and several to domestic affliction and disappointment in business;' even these are scarcely as numerous as those referred to the same articles in other establishments. From all these considerations we are brought inevitably to the conclusion which Mr. Tuke has drawn. He says, 'unless, then, we have a larger proportion of imperfect structures amongst us than obtains in the world at large, we ought to have fewer cases of insanity in proportion to our numbers than is found in the general population.'

"But how is this conclusion to be reconciled with the fact, that the proportional number of cases is actually greater than what is calculated to obtain in the general population. Mr. Tuke observes, 'If I were to enter into this subject I should demur to the data upon which the estimate of the proportion of lunatics in England rests; I believe the parliamentary returns to be so *incorrect* as to afford no fair ground for the estimate which is made; whilst the knowledge of each other which prevails in our Society, and the character of the Retreat, bring nearly all the cases which occur among us into the calculation; I have no hesitation in saying that the standard of sanity is, in some respects, higher amongst us than in the general population. Moral improprieties connected with mental peculiarities are more easily and more frequently stamped as insanity amongst us than in the world at large; while the care taken of our poor prevents any individuals of that class from being allowed to roam at large, or remain at home, on account of the expense of maintaining him in our asylum.' The truth of these observations cannot be illustrated by any remarks of mine. The more the subject is reflected upon the more correct and well founded will they appear."

A number of the *Zeitschrift fur die Beuertheilung und Heilung der Krankhaften Seelenzustände* has recently come to my hands, where the subject of the ratio of the insane of our Society is again handled by Dr. Jacobi, when giving an account of a visit he had recently paid to a number of asylums in this country. He speaks of the subject much in the manner of the preceding author, with, however, some additional remarks, which arose in conversation on the subject with my friend Samuel Tuke, the Treasurer of our Institution, during his stay at York. Jacobi says that "the following reasons were assigned for these striking phenomena:—

"First. Great liveliness of conscience, with the constant straining after the maintenance of unspotted purity of morals, to further which the entire education of the Quakers tends, and which, when serious backslidings occur, gives rise to an uneasiness, which seizing hold of the mind with so much the stronger grasp, easily leads it to despair, and, lastly, plunges the person into insanity; whilst, from the circumstance of the Society leading in some degree the life of but one family, the conduct of every individual therein is under a far more immediate control than is the case in other societies, and renders the situation of offending individuals far more distressing.

Secondly. "The almost exclusive limitation of most of the members of the Society, as regards earning their livelihood, to trade and commerce, agriculture being nearly excluded, as well as all scientific emulation, so far as this is required for the prosecution of political objects, because Quakers, on account of their religious principles, are excluded from the Government, from all political and ecclesiastical offices, as well as

from military service, and therefore find less frequent occasion to concern themselves with the studies and discipline thereto pertaining. In a scientific point of view, therefore, they find themselves, for the most part, restricted to the study of the departments of natural history, with medicine as a branch of it, and only devote themselves to philosophy, theology, and history, according to the smaller need they find among themselves for such sciences; the consequence, however, of the restriction of the great bulk of the Society, in its external activity, to trade and commerce is, that the spirit of trade and commerce is far more dominant among the Quakers than on other grounds one would suppose, and that, therefore, this spirit occasionally brings forth among them its pernicious fruits, though to a more limited extent, and occasions mental derangement so much the sooner, in proportion as it is easier for an inward feeling of discrepancy to be engendered under such circumstances among men brought up to so much fidelity of conscience.

"But there springs from this a third reason; for a great number of the members of the Society, in their universally prevalent struggling to procure for themselves a secure and independent livelihood, when so many never attain it at all, or at least only late in life, remain unmarried; the injurious consequences of this, in regard to the integrity of the organism, in both sexes, especially in the female, and in facilitating the appearance of insanity arising from structural unsoundness, are indisputable. Closely allied to this there exists also a fourth, arising from the fact, that in consequence of the limited number of the members of the Society, marriages, when they do occur, so very often take place between persons related by blood, that the offspring often in a physical as well as a psychical point of view, experience disadvantages well known and often previously noticed."

I have nothing to object to these statements, still there is one circumstance which has a very important bearing on the question, and which appears to be entirely lost sight of by all parties; and as the subject has been brought before the public by Dr. Prichard, and is still kept alive by the more recent work of Dr. Jacobi, that the whole case may be before the public, I am induced to pen the present statement. The circumstance, then, to which I allude is the increased duration of life in our institution, beyond that which obtains in other similar public establishments of the country. About four years ago a cause was tried at our summer assizes, in which an action was brought against an insurance office, to recover a sum of money insured on the life of a person deceased; the payment was resisted on the ground that the deceased was a lunatic at the time the insurance was effected, that his lunacy was concealed from the office, and that insanity was a disease tending to shorten life. On the trial a physician stated in evidence, that in the institution over which he presided, and which he stated to be one of the best managed in the kingdom, the ratio of mortality was 7½ per cent. per annum; but that in another institution which he mentioned, it was double that number. I was myself applied to by the agents of both parties, to ascertain what evidence I could give, if placed in the witness-box; but my *opinions* did not suit one party, nor my *facts* the other; for in making a careful calculation of the ratio of deaths in our institution, I found the yearly average to be exactly 4½ per cent. This average was based on a quarterly report of the number of patients, from the time the institution was first opened in the summer of 1796. From the reports of other institutions, I believe that a mortality of 10 per cent. per annum, is not at all above the average of the public asylums of the country taken collectively, and for the same period of years; and if I am right in this supposition, it evidently follows that with a mortality of less than half, we must have a large accumulation of old cases, which necessarily has a very unfavourable bearing, when we are taking into consideration the proportion of the insane of our society at the present day.

I think I cannot more fully illustrate my views than by sending a table of the ages of all the deaths that have occurred in our institution for sixteen years past; a table which, as I apprehend, will exhibit a result quite unparalleled in the experience of any *similar* public institution, showing, as it does, that out of 84 deaths 41, or very nearly one half, were upwards of 60 years of age; that 24, or more than a fourth, were upwards of 70; and 12, or exactly a seventh part, were above 80. My reason for restricting the table to the period mentioned is, that it is now something more than sixteen years since I entered on my present office; a new burial-ground was opened shortly before I came. This table comprises all the deaths that have occurred since the ground was opened. The register of these cases has been kept by myself, and it contains all the deaths I have had to register.

I have no doubt but that the experience of the institution, as to the number of deaths, was quite as favourable during the superintendence of my predecessors as it has been during my own. Since I made the calculation before alluded to, we have had three years of unusual mortality; on two succeeding years we lost several of our more feeble and aged patients by epidemic influenza, which was very prevalent and fatal in our neighbourhood on both occasions; and last year we lost a greater number of patients than in any former year, without any epidemic; these three years of unusual mortality,

so close together, will have raised our ratio to above 4½, though it will still be below 4½, per cent. per annum.

While on the subject of average mortality I would remark that I think the only correct way of taking it is to count the average number of patients in the house during the year, and not to count all those who have died, and those who have been removed during the year, and add them to the number in the house at the end of it; such a mode of calculation, however correct it may be when applied only to numbers, is anything but correct when time is taken into account. It is evident that in many cases, the average must be taken only in weeks, and in some it may be days, instead of a year.

From the last report of the Glasgow Asylum, which we have recently received, it appears that the latter is the Scotch mode of taking averages; the report says, "The number of deaths is 11 this year, or about 6 per cent. (our total treated being about one hundred and ninety-seven), while the number last year was only 8, or about 5 per cent." At the close of the year the number in the house was only 148, and it does not appear that there ever was a greater number at one time; had I calculated our per centage in the same manner it would have been reduced from 4½ to below 3 per cent.; at least, there is not much to be learned from the deaths of a single year, for on several occasions we have not lost a single patient in the course of the year. I remain, Mr. Editor, thy very respectful friend,

THOMAS ALLIS,
Superintendent of the Retreat.

Retreat, 9th month, 23rd, 1839.

TABLE of the Ages of all the Patients in connection with the Society of Friends interred in the Burial-Ground of the Friends' Retreat, since the present ground was opened in the year 1822.

From 20 to 30 years old.....	6
30 — 40.....	6
40 — 50.....	12
50 — 60.....	12
60 — 70.....	18
70 — 80.....	9
80 — 90.....	11
Above 90.....	1
	75

TABLE * of the Ages of Patients unconnected with the Society of Friends, who have died within the same period, and whose remains were removed by their Friends for interment.

From 20 to 30 years old	1
30 — 40.....	3
40 — 50.....	2
50 — 60.....	1
60 — 70.....	2
	9
	75
	84

* Of the class to which this table refers, at least four had been free livers, or the average age would have been greater.

CONTRIBUTIONS
TO THE
PATHOLOGY OF CHILDREN.

BY P. HENNIS GREEN, M.B.

(Continued from Vol. II., 1838-39, p. 924.)

ACUTE HYDROCEPHALUS.

CASE III.

Headach, constipation, and vomiting at the commencement of the disease; coma on the seventh day, which persists to the termination in death; infiltration of green-coloured serum at the base of the brain.

LEONORE BEREILLE, seven years of age, was brought to the Hospital of Sick Children on the 2nd of April, 1834. The child appears to have been endowed with a strong constitution; father and mother both healthy; she has been in Paris for six months only, and enjoyed during that time perfect health. Six days ago was suddenly seized with headach and vomiting; the latter symptom ceased on the following day, but the headach continued extremely severe; the sight now became feeble, and was even lost at moments. The child, however, was not compelled to remain in bed, but was able to ascend to the fourth story on the 1st of April. On the morning of the 2nd she was seized with alternations of agitation and somnolence, and her answers were somewhat incoherent.

April 3. The child lies in a state of somnolence; the face flushed in spots; returns no answer when spoken to; eyelids closed; pupils dilated, and slightly sensible to the light; abdomen retracted, and free from pain on pressure; no stool since the commencement of the disease; no paralysis or convulsive movements of the limbs, or muscles of face; sensibility of the integuments natural; deglutition not affected; from time to time she emits a slow and inarticulate cry.—Four leeches behind each ear; purgative lavement of senna and mercury; sinapisms to the legs; abstinence from all food.

4. Alternations of flushing and paleness; pupils dilated and motionless; the child cannot see; since this morning she grinds

the teeth now and then, and the jaws are a little stiff; occasional contraction of the arms; the sensibility of both sides of the body is still preserved intact; respiration sighing, 24; pulse small, and occasionally intermitting, 120; no stool; urine passed in bed; deglutition somewhat impeded.

Calomel, eight grains;

Jalap, four grains. Divide into six powders; one every two hours. Sinapisms to the legs; cold evaporating lotion to the head; purgative lavement.

5. The grinding of the teeth and coma persist; face constantly pale, but flushes up when the child is moved; pulse excessively rapid, about 180; respiration 68; passed three fluid motions under her in bed, containing two ascarides; the other symptoms are nearly the same; during the afternoon of yesterday a slight bleeding took place from the nose.—Blisters to the calves of the legs. Continue remedies.

6. Muscles of the jaw fixed; the extremities rigid, and occasionally convulsed; the sensibility of the skin is now dull; the right eyelid paralysed; complete blindness; pupils dilated; lies in a state of deep coma, pulse 176; respiration 40.—Continue the calomel; administer at once a draught containing ether; cold lotions to the head. A seton was also passed through the back of the neck, but the child gave no signs whatever of being sensible of the pain.

7. Same state of profound coma; skin completely insensible when touched; limbs rigid from time to time; pulse and respiration are both extremely rapid. During the day the respiration became interrupted by the rattle of death, and the child sunk early in the night.

Body examined 30 hours after Death.

Nervous System.—The vessels of the dura mater are strongly injected; the arachnoid lining the convex surface of the brain is dry, transparent, and, with the pia mater, is easily detached from the nervous matter; the pia mater of this part, though much injected, is free from adherences or infiltration; the lateral ventricles are not dilated, but contain about two ounces of greenish serum; the lower portion of the corpus callosum, the fornix, and central parts of the brain, preserve their normal consistence and appearance; the rest of the nervous matter is also healthy. Between the membranes, at the base of the brain, there is a considerable infiltration of greenish, opaque, serous fluid, which is likewise found between a few of the convolutions on the sides of the hemispheres; but here there is no trace of granulations, nor any adherence of the membranes.

Respiratory System.—Larynx, trachea, and bronchi healthy. The bronchial glands are tubercular; lungs free from adhesion, but much congested, and contain a few miliary tubercles; a few granulations on the costal pleura of the right side.

Heart and Pericardium normal.

Digestive Apparatus.—Mucous membrane of stomach pale; it is considerably thinned in circular bands, which run perpendicularly to the long axis, and are not far distant from each other. The small intestines contain five or six ascarides, and near the termination of ileum there is a good deal of injection. The colon appears to be healthy, as also do the other abdominal viscera; not a single tubercle in the mesenteric glands.

Case IV.

Acute hydrocephalus.—Death on the 20th day.—Infiltration of the pia mater at the base of the brain; eight ounces of serum in the ventricles; softening of the whole of the central parts of brain.

Cecile Soinie, two years and a half old, was admitted into hospital on the 16th of December.

The child had enjoyed habitually excellent health; never passed any worms, nor suffered from convulsions, although two of her brothers have died of cerebral disease; the cutting of the teeth has not been accompanied by any accident; two of the lower molar teeth have pierced, the two others are pointing, without any heat or tumefaction of the gums.

On the 29th November the child was suddenly, and without any apparent cause, seized with convulsive movements, and with vomiting, which lasted three days, and came on whenever fluid was introduced into the stomach; she also ground the teeth occasionally during the following days. After the lapse of a week the patient was again seized with a more violent fit of convulsion, accompanied by cries, stiffness and spasmodic contraction of the limbs. She now ceased to speak, and in a few days vision was also abolished, the pupils remaining dilated. During the first twelve days of the disease the child had only two evacuations. Leeches were applied behind the ears on two several occasions; purgative lavements were thrown up, and warm baths administered, but without the slightest benefit.

16. The child lies in a state of deep coma; the face is flushed; the pupils widely dilated and vision lost; strabismus; no convulsive movement of the muscles of the face; no grinding of the teeth; respiration broken by low moans every now and then; pulse 130; skin warm; no stool.—Lavement; four grains of calomel.

17. The coma persists; pupils more widely dilated; a portion of the ball of the eye is covered with an albuminous exudation; the muscles on the left side of the body are slightly contracted; some subsul-

tus tendinum; the sensibility of the skin remains intact; deglutition not impeded; abdomen soft and free from pain; passed one dark liquid stool during the night; respiration slow and plaintive; mucous and sonorous râles all over the chest.

The child continued in the above state during the day, and died at night.

Body examined 20 hours after Death.

Nervous System.—Dura mater normal. The membranes which cover the upper surface of the brain are healthy and easily detached from all points, but the hemispheres are distended and give a strong sense of fluctuation to the finger; the lateral ventricles are greatly distended, and contain about eight ounces of turbid serum, holding in suspension a quantity of white flocci, the remnant of the nervous matter. The walls of the ventricles are reduced to a mere pulp, and present numerous irregularities of surface. The surfaces of the corpora striata are also rough, and, as it were, eaten away. The fornix, the septum lucidum, the hippocampi, and a great portion of the corpus callosum are also softened, but without change of colour. The softening is not more remarkable or extensive at one side than at another. At the base of the brain there is an infiltration of greenish semi-transparent matter, about two lines thick, in the pia mater, which corresponds with the space surrounded by the circle of Willis, and a few teaspoonfuls of serum are found at the base of the cranium. The pons varolii and cerebellum healthy.

Spinal Marrow.—The nervous substance appears to be of a healthy colour and consistence, but there is a considerable quantity of turbid serum effused between the membranes.

Respiratory System.—The trachea is filled with frothy mucus. Some old adherences between the lungs and parietes of the chest. The pulmonary tissue is permeable to air throughout, but contains a great number of small, semi-transparent, grey granulations. Heart and pericardium normal.

Digestive Apparatus healthy throughout its whole extent.

Remarks.—In the various cases of acute hydrocephalus which I have published from time to time in the pages of THE LANCET, my object has been to describe the *ordinary* course and symptoms of that disease. In some instances, however, which it would be better to designate as "exceptions" than "varieties," acute hydrocephalus does not present itself with that regular and constant succession of symptoms which characterise the great majority of cases. These exceptions have been noticed by all writers on the cerebral diseases of children, and some of the most important amongst them are illustrated by the four cases which I have just detailed. Without entering into a lengthened examination of the numerous questions which are suggested by such deviations from the normal type of the disease, it may not be amiss to direct attention to a few of their leading points.

The case of Marie Vanvort presents us with an example of hydrocephalus in its most acute form. The child was seized (suddenly and amid the enjoyment of excellent health), on the 12th, with vomiting and headach; on the 13th she fell into a state of coma, accompanied with agitation, loss of sight, impeded deglutition, and occasional movements of the lower jaw; on the 14th the symptoms which are characteristic of acute hydrocephalus, in its second period, set in; and the child died on the evening of that day.

The *post-mortem* appearances were a peculiar dryness of the arachnoid, with deep injection of the pia mater on the surface of the brain; a teaspoonful of clear serum in the ventricles. The spinal marrow was in a healthy state.

Dr. Abercrombie, in his classical work on diseases of the brain, has distinctly pointed out "this dangerous form of meningitis," which he says is "merely characterised by an excessive injection of the pia mater, occasionally accompanied by slight effusion between that membrane and the arachnoid. It prevails chiefly amongst robust and healthy children, of from two to three years of age, and is generally fatal about the third day."

These peculiarities are strikingly illustrated in the case of M. Vanvort. The child was healthy and strong up to the moment of the attack, which commenced with headach and sympathetic vomiting, the usual and almost constant symptoms of acute hydrocephalus in its earliest stage. These symptoms, however, merged rapidly into those of the second stage, during which the disease proved fatal. In fact, if we compare the case with the normal standard, or type, we must admit that neither the first nor the last stages of acute hydrocephalus here existed.

The second case, that of Eliza D'Mainot, presents many points of contrast to the preceding. It is an example of acute hydrocephalus of the most insidious form supervening, in an unhealthy child, on an injury of the head. The subject of this case had been labouring for twelve months under symptoms which many medical men in this country would denominate infantile remittent fever, viz., irregular accesses of fever, loss of flesh, occasional vomiting, and headach; alternations of constipation and purging; cough, &c.

On the 3rd of June the child fell, and wounded herself slightly over the eyebrow; this excited no attention, for the patient made no complaint and seemed to suffer no inconvenience whatever from the accident.

On the night of the 5th she fell suddenly into a state of coma, and continued in that condition, with enormous dilatation of the pupils, slow pulse, and paralysis of the extremities until death. The lesions discovered on examination were effusion into the ventricles, with softening of the fornix and corpus callosum; injection of the membranes at the base of the brain; traces of chronic pleurisy and tubercles in the lungs; tubercular ulceration of the intestine. This case is exactly similar to the 54th observation of Dr. Abercrombie, in which the patient, a child six years old, is described as having suddenly fallen into a state of coma without any premonitory cerebral symptoms; the coma persisted for several days, with dilated pupils and loss of speech, until death closed the scene. The lateral ventricles contained about four ounces of serum, and the central portions of the brain were softened in a high degree.

Here, then, are two cases in which the first stage of acute hydrocephalus was more or less completely absent. If we examine the symptoms attentively we shall find the closest analogy between them, yet how apparently distinct and different were the pathological characters; in one, softening of the central nervous masses with considerable serous effusion; in the other, simple inflammatory injection of the pia mater, without effusion or softening of the central parts. Are we not, then, compelled to acknowledge that simple congestion of the brain and its membranes can give rise to the same degree of coma, with loss of one or more senses, and paralysis, as can be produced by an extensive effusion of serous fluid into the ventricles?

The symptoms of thoracic and abdominal disease under which D'Hainot laboured for twelve months previously to death were explained by the post-mortem appearances. The irregular accesses of fever and diarrhœa evidently depended on tubercular ulceration of the bowel. One circumstance, however, is particularly worthy of notice. Although affected with diarrhœa at the time of the accident, which either gave rise to or (what seems more probable) accelerated the development of the cerebral symptoms, the patient immediately became costive on the appearance of the latter; purgative enemata produced no effect. This sudden change in the condition of the alimentary canal, as an excreting organ, affords a precious means of diagnosis in the cerebral diseases of children.

Dr. Abercrombie considers that the essential characters of acute hydrocephalus are inflammatory softening of the central parts of the brain, generally accompanied by more or less effusion of serous fluid into the ventricles. This is true in a great number of cases; but on the other hand we must admit that all the symptoms of the disease may be produced by simple inflammation of the pia mater, without any softening of the central parts, and with little or no effusion into the cavity of the ventricles. The cases which have been already published sufficiently demonstrate this fact; it is illustrated, moreover, by case 3, of Leonore Bereille. Here the onset of the disease was very insidious. There were present, indeed, vomiting, headach, constipation, and partial loss of sight, but the patient was able to walk about until the seventh day, when coma supervened, and continued without intermission until death. The pupils were dilated at an early stage, but, instead of paralysis, we find occasional contracture of the upper extremities. The lesions discovered after death were slight effusion into the ventricles, the central nervous masses being healthy; effusion of greenish coloured serum at the base of the brain, with injection of the pia mater, and the same remarkable dryness of the arachnoid which we have noticed in former cases. Retraction of the abdomen is mentioned amongst the symptoms. This occurs in a well-marked degree, and at an early stage, in numerous cases of acute hydrocephalus. Gœlis regards it as being almost pathognomonic of the malady, and has received the credit of being the first author who directed attention to it; but we find the same symptom distinctly alluded to in 1814, by Dr. Carmichael Smyth, who says, "Their abdomen is commonly flat and compressed in a manner I have seldom observed, except in persons affected with painter's colic."*

The remarks which I have just made, though desultory, have extended so far beyond my intention that I shall conclude by simply noticing a few of the points illustrated by the fourth case, that of Cecile Soinie.

The exciting cause of the malady here seems to have been dentition. The symptoms of the first stage were very irregular, consisting in vomiting, with convulsions, spasmodic contraction of the limbs, loss of speech and vision. The second stage was of extremely short duration; the third stage was marked by great insensibility and dilatation of the pupils. These latter symptoms coincided with enormous distention of the ventricles and softening of the central nervous masses; but the most interesting point is to determine, if possible, the cause of the variations observed in the symptoms of the

* Smyth on "Dropsy of the Brain," London, 1814, p. 36. I cannot omit this opportunity of calling attention to the short treatise of Dr. Smyth, which has fallen into my hands within the last month. It contains many profound and correct views of hydrocephalus, and has anticipated several of the conclusions deduced from recent observation.—P. H. G.

first stage. This stage was characterised by irregular accesses of convulsions, and did not present the ordinary phenomena of headach, vomiting, drowsiness, &c., passing insensibly into a state of coma. We occasionally, then, find that acute hydrocephalus sets in with a convulsive or epileptic access, especially in a young child; but whence this deviation from the normal type? I would suggest, although with great reserve, that it may sometimes depend on the spinal marrow being complicated in the disease. In the case of Cecile Soinie there was a considerable effusion of turbid serum between the membranes of the spinal marrow, similar in appearance to that collected at the base of the brain, and evidently dependant on the same condition of the blood-vessels. In several other cases which I shall have occasion to describe hereafter, the occurrence of convulsions at an early stage coincided with softening of the upper portion of the spinal marrow. It is to be regretted that no information on this point can be obtained from writers on the cerebral diseases of children. The works of Dr. Abercrombie and Dr. Cheyne contain numerous cases of acute hydrocephalus, but on carefully examining them I do not find that the spinal marrow had been inspected by these distinguished physicians in a *single* instance. The cases which I shall present in succeeding numbers of THE LANCET may, therefore, claim some attention on this score, if on no other, for in all the spinal marrow was examined with scrupulous care.

EXTRACTION OF CALCULI FROM THE URETHRA.

To the Editor of THE LANCET.

SIR:—If you consider the accompanying description and drawing of my newly invented instrument for extracting fragments of stone lodging in the urethra, worthy of a place in THE LANCET, you will oblige me by inserting them. I am, Sir, your obedient servant,

A. J. BURMESTER.

149, Aldersgate-street,
Sept. 23, 1839.

The instrument consists of a silver canula (a, a, a, Fig. I.) nine inches long, at one extremity of which is fixed a pyriform body b, Fig. I., in such a manner as to leave four openings c, c, c, c, Fig. I., through which the openings d, d, d, d, Fig. II., protrude. These springs are common watch-springs, supplied with a small hook or hooks, at the protruding extremity, and fixed with the other to the round body, e, Fig. II., which is provided with a handle f, Fig. II., for the purpose of moving it up and down in the canula, and thereby causing the spring to protrude or recede as may be requisite.

Before introducing the instrument into the urethra, the surface should be well oiled, and its springs retracted. The stone should be held in situ by resting the thumb of the left hand gently on the surface beneath it; then placing the middle and third finger through the rings, g, g, Fig. I., let the end of the canula be brought in contact with the stone. Very little pressing the handle (f, Fig. I.) with the thumb, will cause the springs to protrude, and thus the operator may, with little difficulty, grasp the object of his search; the instrument may then be cautiously withdrawn together with the stone, whereby the painful operation of previously cutting down upon it will be avoided.

Should any gentleman be desirous of inspecting the instrument, I shall be most happy to afford him an opportunity of doing so.

Fig. 1.

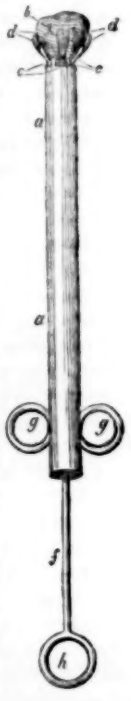

Fig. 2.

THE LANCET.

London, Saturday, October 5, 1839.

THE subject of vaccination is the most important one in the whole range of medical science. Unbelievers in the power of the healing art may sneer at the successful practice of the physician, and attribute the merit of having arrested the hand of death to nature and not to man. The causality of cure in many cases of disease is not easily established; but in the protective influence of vaccination we witness a successful struggle of art against nature. The value of vaccination is capable of mathematical demonstration. The mortality of natural small-pox is clearly established; it destroys human life with the violence of a plague, and the survivors are wretched objects of the pestilence which has afflicted them. Since the introduction of vaccination a mild and inoffensive complaint has been substituted for a loathsome malady; the mortality of small-pox has been diminished by one half; and three years have been added to the span of human existence. These are in themselves sufficient advantages to render vaccination what we have frequently termed it in the pages of this Journal, the greatest boon which science has conferred upon mankind. But man, after all, is a frail and miserable machine. The seeds of decay and death are innumerable. We may defer the fated hour for a few short months—for a few years—but that body in which we now carry ourselves so proudly must return to the dust whence it sprung, and be dispersed by the winds of Heaven, we know not whither. Vaccination cannot render us immortal; like every other human discovery, it has its imperfections, and we only deceive ourselves and deteriorate, in public estimation, its real value, by an attempt to overrate the benefits which may accrue therefrom.

In various numbers of the last volume of THE LANCET we entered into a conscientious examination of several questions connected with vaccination which have recently agitated the public mind. We pointed out the increasing prevalence of small-pox during the last few years, in the different kingdoms of Europe. The accuracy of this statement has been called in question, so far as England is concerned, but it has been fully confirmed by the "Report of the Registrar-General of Deaths," &c. During the half year ending on the 31st of December, 1837, the number of deaths occasioned throughout England and Wales by small-pox amounted to nearly *six thousand*, and if a similar rate of mortality prevailed in Scotland and Ireland, the number of deaths from small-pox within that period did not probably fall short of six thousand more.

We also submitted to our readers a very extensive series of statistical facts, collected from various sources, and observed in different parts of Europe. From an analysis of these facts we were compelled to conclude. 1st. That cases of small-pox after vaccination have recently become much more numerous than during the period which immediately succeeded JENNER's discovery. 2nd. That the susceptibility of small-pox in vaccinated persons increases with the lapse of time since vaccination.

In announcing the above conclusions, we again repeat that we were influenced by no other desire than to lay a carefully studied and correct view of this important question before the public. But as every subject may be viewed in different lights, and as our deductions may not have been strictly logical, we again refer to the question of vaccination, for the purpose of communicating some facts contained in a document recently published by the Provincial Medical and Surgical Association. The object of this pamphlet, which is entitled a "Report of the Section appointed to inquire into the Present State of Vaccination," is evidently to refute the statements and deductions published by us on the subject of small-pox. The Report, however, contains a good deal of interesting matter, and as we

can sustain, without any effort, the criticisms of the "Provincials," we shall proceed to analyse its contents without further notice.

It was a fundamental doctrine of JENNER, that cow-pox and small-pox are not dissimilar, but *identical* diseases, and consequently that the *variolæ vaccinæ* is not the preventive of small-pox, but the small-pox itself, the virulent disease being but a malignant variety. This doctrine is the only one which can satisfactorily explain the protective influence of the vaccine virus. On what facts is it based? They are the following. Cattle and other animals have, from time immemorial, been known to be affected with true small-pox or *variola*. The disease prevailed among domestic animals in 1745, in 1770, and in 1780. Dr. LAYARD describes one of these attacks, and mentions that inoculation from cow to cow was successfully practised to mitigate the severity of the disease. The cows in Bengal have long been affected with this complaint, and what is very remarkable, the natives employ the same term (*gotee*) to designate the disease in the cow and in man. Mr. MACPHERSON inoculated eleven children with this matter, and in one produced the true vaccine complaint. In 1837 another series of inoculations was performed with virus from diseased cows, but a true small-pox was communicated to the children.

The facts just stated seem to prove that a severe variolous disease may be communicated from inferior animals to man, as well as a more mild and benignant affection. But to render the evidence complete it remained to be shown that *human small-pox* can be communicated to the cow. Upon this point the "Report" contains several well-authenticated facts. Dr. WATERHOUSE, of Massachusetts, relates that a number of healthy cows having been milked by persons who laboured under small-pox, the teats and udders became affected by an eruptive disorder so like the small-pox pustule that all the medical men who examined the disease declared it to be genuine small-pox. Moreover the experiment of directly inoculating the cow with human small-pox virus has repeatedly been performed with success. In 1801 M. VIBORG produced the disease in this manner at the Veterinary College of Berlin. GASSNER also imparted small-pox to the cow by inoculation, and Dr. MACMICHAEL assures us that in Egypt the inoculation of the cow with small-pox taken from the human body was productive of a fine active vaccine virus. Finally, Mr. CEELEY, of Aylesbury, has succeeded, after many fruitless trials, in impregnating the cow with human small-pox. "He produced five vesicles on the cows, from which source several hundred patients have been vaccinated, who have exhibited all the phenomena of vaccination in the most perfect form and complete degree. There was no attendant eruption, nor anything that could lead him to suspect that he had not, in this manner, propagated the genuine *variolæ vaccinæ*."

Having thus analysed the most important facts contained in the "Report" which seem to establish the identity of small-pox and cow-pox, we arrive at the portion dedicated to the "protecting power of vaccination." Here we regret to say that the reasoning is of the most vague and superficial description. Instead of facts we have "assertions," "convictions," "impressions;" the most slender testimony is dwelt upon as demonstration, while an attempt is made to slur over the manifest contradictions and imperfections in the accounts forwarded by the "provincial practitioners," under the flimsy sophism—"If the vaccination be perfect, not evanescent, &c., it affords unlimited protection."

But to the facts, such as they are. The total number of deaths after vaccination, reported throughout nearly the whole of England, amount to very little above thirty. Neither Messrs. DUNNING, WARNER and WOOD, nor Dr. HENRY JENNER, have seen a death from small-pox after vaccination. Messrs. GOOLDEN and GREENHOW think that

vaccination is at least equal in its protective power to small-pox itself. Similar *negative* testimony from other gentlemen is adduced, but its bearing upon the question at issue is extremely remote indeed. Assuredly our brethren of the "Provincial" would make excellent witnesses at an Old Bailey trial; they will prove to demonstration that your pocket could not have been picked by A B, because, forsooth, they were not present at the larceny. The experience of the National Vaccine Establishment is next referred to in the "Report," as a proof of the protective influence of vaccination. During the years 1825 and 1832 inclusive, 83,646 patients were vaccinated at the different stations. Amongst the whole number only two cases of death from small-pox after vaccination are mentioned. Another very important fact is derived from the statistics of the Royal Military Asylum at Chelsea, from which it would appear that a greater number of cases of small-pox followed small-pox than vaccination, and that of the five fatal cases which occurred in the establishment during the years 1803 to 1833 inclusive, three were after small-pox, whereas, not one happened after vaccination.

The testimony of some of the Dublin physicians is equally favourable, but unfortunately confined to the *negative* side of the question. During an extensive practice of thirty-six years Dr. Labatt has not witnessed a single case of death from small-pox after regular vaccination. Dr. O'Brien asserts that no case of small-pox had been admitted into the Fever Hospital (the chief receptacle for small-pox amongst the poor) during the last twelve months, and that for a period of twenty-five years a few incidental cases only of small-pox had been admitted, and those generally were persons who had not been vaccinated.

Mr. Kirby, of Dublin, who, for more than thirty years, has had the most extensive opportunities of observation, states *his firm belief* in the protective power of vaccination, and justly observes that he must have seen variola among adults of all ages, had the prophylactic virtues of vaccination been temporary and evanescent, as some have asserted them to be.

Such is the nature of the testimony on which the Committee of the Provincial Association think themselves bound to declare "that, with one exception, they do not find "anything to authorise statements respecting periodical failure of the vaccine influence." Their inquiries have been exclusively confined to the present state of vaccination in these countries, and for the following *modest* reasons. Because the opinions entertained in foreign countries are often of a contradictory nature; because the experiments on which these opinions have been founded are not less so; and, finally, because the luminaries of the "Provincial" flatter themselves that the sources of these contrarieties are soon likely to be removed.

The question, then, may be resolved into the two following propositions:—On the Continent (Denmark, Germany, &c.) the practice of vaccination is confined to medical men, and is moreover enforced by law, no person being allowed to marry without a certificate of its having been undergone. The strictest *registration* of all vaccinated persons is maintained, and the rules for the operation are universally diffused. *Ergo*, the observations of continental medical men on the subject of vaccination are worthless.

In England any old woman may vaccinate or inoculate at pleasure; there is no registration of cases; no correct or authentic history of any extensive series of vaccinations. Instead of facts and numbers we have the *belief* of Mr. K.; the *impressions* of Dr. B.; the *firm conviction* of X, Y, and Z. Therefore the opinions of the correspondents of the "Provincial Medical and Surgical" are correct and irrefragable. In truth, self-laudation may characterise societies as well as individuals. The "Provincial" bump of self-esteem is prodigious.

The Anniversary Meeting of the British Medical Association will take place on

Monday next, the 7th instant, at the Freemasons' Tavern, Great Queen-street. On that occasion there will be a goodly assemblage of true-hearted reformers, at whose festive board we intend to have the pleasure of being present. The objects of the Association are too well known to need any comment or explanation. They have been hitherto pursued in an open, manly, and straightforward way, and we feel assured that the exertions of the members will never flag until the rights and privileges of the profession shall have been fixed on a firm basis. The present is a favourable moment for reformers to meet together and deliberate. If any measures of medical reform be proposed at the ensuing meeting of Parliament they must be supported by the loud and unanimous clamour of the profession, for the "still, small voice" of reason is seldom powerful enough to arouse that sluggish assembly. We therefore invite all those who have at heart the real interests of their profession to join forthwith the demonstration about to be made by the British Medical Association. The harvest is nearly ripe, but those who would reap the fruit must labour.

THE INTRODUCTORY LECTURES.

DR. WILLIAMS AT UNIVERSITY COLLEGE.

The introductory lectures of the present session have presented nothing out of the usual way. They have been, as heretofore, redolent of promises, and redundant with expressions of regard for the welfare of the student.

The chief point of attraction on the 1st was the introductory lecture of the new Professor of the Principles and Practice of Medicine at University College. Those who have known Dr. Williams only as a speaker at the Westminster Medical Society must have been agreeably disappointed at the able manner in which his first essay in his new office was performed. His lecture, if it did not contain any very striking passages, or possess the originality which characterised the introductory address of Dr. Grant, delivered in the College some years ago, and published in this Journal, was, nevertheless, above the usual standard of such performances. The main points of this lecture would serve as a text to all the others delivered on the same day. The importance of the science of medicine; its value when compared with other professions; a general outline of its history; and a brief enumeration of the advantages of the various branches of study, as laid down in the curricula of the institutions, made up the total. The Professor made some very judicious remarks on the necessity of medical practitioners receiving all new *facts* with caution, and showed the evil of building up a system on a single new or supposed discovery. He remarked that no profession was so lightly esteemed as that of medicine, owing to medical men being, like the "sun and air, too common and too cheap," but he said nothing of the evils inflicted by the corporations. In concluding his address he stated that he had been unable to prepare his first course in a manner which he should have wished, owing to the very unexpected and sudden way in which he had been elected to the office he then filled. Like his predecessor, Dr. Williams is deficient in oratorical power; his voice is low, and he occasionally drops it towards the conclusion of a sentence. This failing, however, he will probably not be slow in remedying.

At King's College Mr. Arnott led the van, surrounded by a host of divines; the only remarkable feature in his address was the mode in which he dwelt upon the rise and progress of hospitals, which owed their origin, he said, to Christianity. There were many Christian subscribers to King's College Hospital present.

The Borough schools were rather dull, and the smaller academies made a decent show, by the great perseverance which had been manifested in the distribution of invitation cards.

MEDICAL SOCIETY OF LONDON.

Monday, September 30th, 1839.

Mr. HEADLAND President.

THE first meeting of the session was held this evening.

The PRESIDENT announced the alteration made in the amount of the annual subscription, which, for the future, instead of two guineas, will be only one, with a guinea entrance fee.

Several new members were proposed.

TREATMENT OF GONORRHŒA AND GLEET.

Mr. ROBARTS introduced the subject of the treatment of gonorrhœa by stating that he had lately had two obstinate cases of gleet, in which he had found it necessary to use a strong injection of the nitrate of silver. He wished to know the experience of members in reference to this remedy. In the cases in question, which had resisted the usual remedies, he had employed an injec-

tion consisting of fifteen grains of the nitrate of silver to an ounce of water, and the result had been most satisfactory. His plan of proceeding was to recommend the patient to inject the lotion once, three nights in succession; then to allow a week to go over, and if the patient was not then completely cured, to resort to the remedy again. In the two cases alluded to violent inflammation of the mucous membrane of the urethra was induced, the presence of which was indicated by intense pain, and a very profuse discharge, mixed with a quantity of blood. By the following afternoon, however, these symptoms were much mitigated, and the patients were prevailed upon to go on with the injection. The second application produced less severe effects, and after the third trial a cure, in one case, was effected. In the other instance it was found necessary to repeat the use of the remedy three weeks in succession. Regarding the treatment of gonorrhœa generally, he had always been more successful in effecting a speedy cure in those cases in which he premised the employment of the usual specifics by one, two, or three weeks active purgation. This, followed by the exhibition of cubebs or copaiba, would effect a cure in eight instances out of ten. In those obstinate cases, however, in which a gleety discharge still remained, and which seemed to baffle all remedies, mild injections, such as the sulphate of zinc, amongst the rest, he considered would be at once controlled by the nitrate of silver injection.

Mr. Lord had had much experience in the use of the nitrate of silver, when applied to that chronic condition of the mucous membrane of the urethra upon which gleets depended. He frequently applied a solution containing a drachm of the nitrate of silver to the ounce, and in some cases had passed the solid caustic down to the lacunæ whence the discharge proceeded. He had invariably found it a successful remedy; and in no instance had any bad effects followed its employment. He had never observed that it produced any of those severe inflammatory symptoms which the last speaker alluded to. He considered that a strong teazing solution would produce more pain than a stronger one, like that he had employed. Many practitioners refrained from the use of lunar caustic from the fear of bad consequences; but their apprehensions were not well founded. Let the timid read Mr. Higginbottom's book on the subject. Dr. Wallace had related a case in which the caustic in substance had been applied to the mucous membrane of the vagina for obstinate leucorrhœa. In this instance a piece of the caustic was broken off, and remained for some time in the vagina. No bad consequences followed. The foreign body came away surrounded by mucus, and a cure was effected.

Mr. Dendy, in cases of gleet which had baffled all his attempts at cure, was in the habit of recommending his patients to discontinue all medicine, and to pay strict attention to their regimen. He had usually found, where this had been attended to that, in the course of two or three weeks, or of a month or two, the discharge was entirely gone.

Mr. Hooper had found gleet to be frequently the result of irregularity in diet, and of intemperance. In cases which had resisted the usual specifics, he had found an injection consisting of five to ten grains of sulphate of copper, and two ounces of water, very successful.

Mr. Hutchinson had, in two or three cases of gleet in which the ordinary injections were inefficient, employed a solution of nitrate of silver, four grains to the ounce, with success.

A Visitor never ventured beyond two grains to the ounce. He had invariably found this an effective quantity.

Dr. Clutterbuck considered that gonorrhœa, like many other diseases, would be as much controlled by time as by remedies. The do-nothing plan of proceeding would in the majority of cases be found successful. Of course any urgent indication would be fulfilled. He thought, however, that, like catarrh, the discharge would cease of itself. Gonorrhœa depending, as it did, upon a specific inflammation, might lead to the supposition that it required specific remedies; this, however, did not follow, as many specific diseases obeyed the same laws as other complaints.

*** We trust that the London Medical Society will adopt some mode of rendering its proceedings more useful to the members, and more interesting to the public. A common-place conversation on clap at the first annual meeting of a scientific body is but meagre fare indeed.

UNIVERSITY COLLEGE HOSPITAL.

RESTORATION OF A LOST NOSE BY OPERATION.

W. S., aged 18, was admitted Aug. 22, under the care of Mr. Liston. His constitution is good, but his face is greatly disfigured from the loss of part of the cartilage of the nose. He had a large congenital nævus at the tip of the nose, which the late Sir William Blizard removed by ligature, when the patient was of the age of three years.

Aug. 14. The operation for the restoration of the nose being determined on, Mr. Liston pared the edges of the part which remained; then, having marked out the portion of the skin to be removed from the forehead, he dissected it off, and brought it down with a

twist at the root of the nose, and secured it on each side by three sutures. A considerable quantity of blood was lost, but no vessels required ligature.

17. He has been going on well, and the sutures were removed to-day; they had not, however, produced any irritation.

25. Mr. Liston pared the lower edge of the flap representing the right nostril, which was rather longer than the left, owing to the twist over the root of the nose. Wound on the forehead granulating and discharging healthy pus.

Sept. 11. The twisted portion of the flap was cut through, and a part of the root removed; the new skin, in this situation, was pared thinner, and exactly fitted into the space left for it in that part covering the nasal bones. The whole was secured by three sutures.

13. Some slight erythema about the face; sutures removed; hot fomentations.

27. Going on well; sore on forehead nearly healed.

HOSPITAL GANGRENE.

O. S., a tailor, was admitted under the care of Mr. Liston. He had, on the 22nd of August, received an injury of the hand, from a rope having been suddenly drawn very tight round it. There was a lacerated wound at the back of the hand, with dislocation and fracture of the first phalanx of the middle finger. He went to the Dreadnought Hospital, and after some time came here. He has a sloughy, fœtid, offensive wound at the back of the hand, the whole sore being converted into a greyish ash-coloured homogeneous mass. Mr. Liston removed the middle finger, and applied nitric acid freely. The patient took bark, eight ounces of wine, and four ounces of brandy, daily. After the application of the nitric acid the character of the wound was rapidly changed, but on

Sept. 2, another sloughy, fœtid, and sanious mass was observed on the palm of the hand, to which nitric acid was freely applied. He is very tremulous, and has an extremely nervous and irritable manner; he sleeps somewhat at night.—To have one grain of sulphate of quina, eight minims of tincture of opium, with an ounce of infusion of bark, three times a day.

3. In the palm of the hand, about the base of the metacarpal bone of the little finger, another sloughing sore has appeared, to which the nitric acid has been applied. He suffers from tarsal inflammation of the eyelids, and uses a lotion of sulphate of zinc.—A grain of acetate of morphia every night.

4. There is much less constitutional irritation; his tongue is covered with a white fur. The whole of the wound on the back of the hand is granulating freely, and has assumed a healthy appearance; it is dressed three times a day with diluted red wash.—The ulcer in the palm has still a dark sloughy appearance, and nitric acid was again applied. He continues the draughts, and the irritation and nervousness, as well as the anxious expression of the countenance, have nearly subsided.

7. He sleeps well at night; all the sores are granulating freely, and have a healthy appearance.—To leave off the opium, but to continue the bark and quinine.

15. Abscess in forearm opened yesterday; wound healing favourably, and contracting fast; gains strength rapidly; goes out daily.

17. His improvement is rapid; the sore on the palm of the hand has nearly healed.

21. Going on well, all the sores healing. A straight splint was placed on the palm of the hand, and the fingers bandaged down, as they are beginning to stick up, from the contraction of the cicatrix on the dorsum of the hand.

30. Sores almost healed.

CHARING-CROSS HOSPITAL.

DROPPING OF THE HAND FROM LEAD?—MODES IN WHICH LEAD IS IMBIBED INTO THE SYSTEM.

J.P., aged 48, hair-dresser, of dark complexion, middling stature, and muscular conformation, was admitted Aug. 9, under the care of Dr. Chowne.

History.—When a youth was apprenticed to a printer, and worked at the trade for three or four years, during which period he never had colic, paralysis, or any indisposition that could be attributed to the action of lead. He subsequently went to sea, and continued a seafaring life until the last five years, during which latter period he has worked as a gas-fitter. This occupation, however, has not subjected him to contact with lead; he has been chiefly employed in a branch of the trade in which iron pipes are employed, and are joined together not by solder but by screws. He says he has not made more than four or five joints with solder during the whole time. White lead is sometimes used by gas-fitters, but not in that kind of work about which he has been employed. He says, in fact, that his work has not made it necessary for him to meddle with any other metal than the iron of the gas-pipes. He has nothing to do with paints and colours. About twelve months since he had been working during the night amongst gas-pipes in a damp cellar under Sadler's Wells Theatre, and upon waking the following morning he found that his hands hung down from the wrist when the forearms were extended, without his having the power to raise them; and he could not keep them elevated in a line with the forearm unless he had something to rest them upon. The debility was so great as to render him quite unable to dress himself. He

had hoarseness, and was unable to speak aloud. The hoarseness lasted about a week. During the first six months no improvement took place in his hands; he could not open or close them, or move his thumb or fingers. There is nothing peculiar about his general health, except that he considers himself rather wasted. He has been taking occasional alterative doses of mercurial medicines, aperients, mild tonics, and moderately nutritious diet, and he has diligently used a stimulating liniment to the affected parts. During the last month the power of his hands has been returning, and he has much more command over them; the right, however, is much weaker than the left; in both the flexor muscles are much stronger than the extensors. To the right hand a splint and bandage had been applied, but the wrist became swollen, red, and inflamed, and it has been necessary to discontinue them. There is not any obvious cause to which the inflammation can be attributed; he has not similar swellings or pain in any other joints; this affection of the joint is subsiding under saturnine lotion.

In some remarks on this case Dr. Chowne observed that it appeared to be one of those instances in which paralysis, with the peculiarities characteristic of that condition as produced from lead, existed without any connections that could be traced between it and that metal.

We knew that lead might be introduced into the system by the stomach, and that it most commonly occurred amongst persons who worked either in lead mines or with colours in which lead was used, amongst printers and others who had to do with metals containing lead, and who were not careful to wash their hands when they took their meals; nor to use the precaution of changing their dress when the day's work was over, and that those who did use such precautions very commonly escaped. Lead might also find its way into the stomach, mixed with our food or our beverages. Dr. Shearman had observed that even fatal effects sometimes followed from an adulteration of gin with sugar of lead. Dr. John Hunter stated that a violent colic prevailed amongst the soldiers in Jamaica in 1781-2, supposed to be occasioned by drinking rum contaminated with lead. It had been observed in America that spirits distilled in leaden worms contained lead. Cyder, in some instances, was racked in leaden vessels, and the apples were sometimes bruised in troughs in which lead was used.

Cheese was sometimes coloured with red-lead, although, certainly, most generally with annath. The acetate of lead was sometimes used in clarifying sugar when in the state of syrup; and an instance was recorded in which many persons were simultaneously seized with colic who had partaken of some sugar obtained from the same merchant. In addition to these and numerous other modes in which lead might become mixed with our food, it might also become mixed with it either in the vessels in which it might have been kept, or in the culinary processes which it underwent. Many of the metallic vessels used for such purposes contained lead; most of the earthern vessels were glazed with this metal, and were particularly liable to be acted on by the vegetable acids. Milk, also, from its capability of acting upon lead, and from being, in some instances, a principal article of diet, might occasionally originate the paralysis in question.

We might also, perhaps, be induced to consider that water received and retained in leaden vessels would be contaminated with lead, but this was a rare occurrence, as the existence of neutral salts in water, although in very small quantities, rendered it incapable of dissolving lead in any quantity worthy of consideration, and while distilled water was capable of becoming contaminated with lead, the same water, with the addition of even an extremely small quantity of neutral salt, was not.

We were aware, also, that lead might pass into the system by the lungs, even in the course of a short time, in quantities sufficient to produce the specific ill effects of that metal; indeed, breathing the dust or vapours of lead was a remarkably rapid mode of affecting the system. The ill effects of lead had been found to prevail, for example, in a white-lead manufactory, in the atmosphere of which white-lead was detected. The volatilised fumes emanating from paint, largely spread, as it was, over newly-painted apartments, carried with them oxide of lead in combination with the turpentine, which passed readily into the lungs, and thence into the system.

There were numerous instances, also, of preparations containing lead, applied locally and externally, having passed into the system, as in applications of saturnine lotions and ointments to hæmorrhoids, ulcers, eruptions, and other affections. In the case under consideration it did not appear that the patient had worked amongst lead, for although a gas-fitter, he said that he had had nothing to do with the flexible metallic pipes, into the composition of which lead entered; he had little or nothing to do with soldering joints; he had not worked amongst paints, nor had he been in the habit of taking cyder or wines likely to be, as it was called, "doctored" with lead. His general drink was beer, although on its being hinted that he was not proof against the sedative influence of rum, "he owned the soft impeachment." At home he had been living as working men generally did; his food was cooked in tin vessels; he drank his beer out of the ordinary pewter pots, or an earth-

ern mug; the water of which his tea was made was received into a wooden cask.

As the sources, however, by which lead might be taken into the system were so very numerous and in many instances so difficult of detection, we must of necessity be cautious in pronouncing upon its being positively absent, merely because we could not detect it; and in the case of J. P., although no connection between the disease and lead could be traced, he (Dr. Chowne) did not therefore feel assured that none existed. On the other hand, however, we must be prepared to admit that persons working in other metals than lead, and those in whom no connection with lead could be traced, were occasionally attacked by either lead colic or palsy.

We found this affection extremely rare amongst women; an additional reason for supposing that even when we cannot trace a connection between the employment of lead in the disease, that still an undiscovered connection existed. Amongst boys, also, the disease almost invariably attacked those who were engaged in some way about lead. Out of 278 patients admitted into one of the hospitals in Paris, 241 of them were artificers who were exposed to lead; 17 mechanics exposed to copper; and 20 mechanics who were not exposed to either of these metals.

MEDICAL JURISPRUDENCE.

INQUESTS IN MIDDLESEX.

SUDDEN DEATH FROM CRAMP IN THE STOMACH AFTER DELIVERY.

[INQUEST held before Mr. WAKLEY, in Devonshire-street, Lisson-grove, on Friday, Aug. 30, 1839.]

Ann Byers, single woman and midwife, of Bell-street, Marylebone, said the deceased was the wife of John Irons, a carter, in Devonshire-street; was twenty-two years old; she was pregnant, in good health, and sober. She was delivered on Monday, April 26th; witness was engaged as nurse. At three o'clock in the afternoon she was in labour, which was very slow, but went on comfortably until after tea. At about seven o'clock the labour increased. Mr. Nice, a surgeon, had seen her at four o'clock; he left for about twenty minutes, and then returned, and remained with her until she was delivered, at about eight o'clock, of a girl. No instruments were required or used. It was her first child. The afterbirth was removed in about ten minutes. She complained, after delivery, of dreadful pain, like the cramp, over both sides of the abdomen, and asked for some gruel. Mr. Nice had given her a draught, and gone, saying that he would return in the morning; but the pain was so great that he was fetched back in about five minutes before she was taken worse; she vomited and was very restless, but not before Mr. Nice left. Mr. Nice returned in a quarter of an hour; heard him order brandy, and hot water to the feet. At about ten o'clock she died. The child is living.

Dr. David D. Davis, of Russell-place, Fitzroy-square, Professor of Midwifery in University College, by order of the Coroner had examined the body. His son assisted under witness's direction. It appeared to be that of a healthy subject. The uterus was sound and unruptured, and maintaining its usual connections. It was in a state of as much contraction as it ought to have been at the time of her death, after a healthy labour. Its internal surface was free from disease, and from any remnants of placental tissue, excepting at one point, and that was less in quantity than witness had seen in many cases that had been fatal from other causes than the one which probably occasioned death in the present instance; the appearances indicated that no great quantity of blood had been lost. He examined the stomach, but death from cramp was one of those results in the puerperal state which left no evidence of its having existed as a cause of death. He has no doubt, however, that the immediate cause of death was cramp of the stomach. But there were no unhealthy appearances; no contractions. It was not necessary to examine the head nor the spine. Has no doubt at all that the woman died a natural death; such cases have not been very frequent in the course of witness's long experience,—two or three, perhaps, in the course of some years; in many years not one. Although natural it is a case of unusual occurrence. No blame was to be attached to any one. Has known very sudden death where not even a spoonful more than usual of blood was found in the uterus, or out of it, during or after the removal of the placenta. It was a case of puerperal disease.

THE ACCIDENTS OF CHILDBIRTH.

To the Editor of THE LANCET.

SIR:—We owe it to an enlightened and intelligent age that we have now a system of registration whereby we are enabled to to discover the exact amount of human mortality, the different diseases by which it has been produced, the different districts in which such diseases have prevailed, and the proportion, with respect to extent and population, where the mortality has been the greatest.

Upon referring to the annual statement of the Registrar-General, and the excellent tables of statistics by which it is accompanied, it will appear that 1265 parturient

females are yearly lost in childbirth; and I am happy to offer a tribute to the discernment and humanity of our excellent Coroner, who has denounced this alarming and unsatisfactory cause of female destruction as a subject for public inquisition.

Death by childbirth is a term which, taken in its common acceptance, would imply an undelivered state of the fœtus, but this class of parturient sufferers, or mothers who die undelivered, the *units* of the above great number, 65, would, I should think, be sufficient to enumerate.

The three great causes of puerperal dissolution, must be considered to be of the incidental kind, as they all occur *after* delivery, and may, I believe, divide the 1200 of this frightful aggregate between them, namely, hæmorrhage, convulsions, and uteritis.

It is to the second, the most certainly fatal, and the least defined of these, that I shall beg to address some observations founded upon long practical experience, and which I confidently hope will serve to elucidate the nature, and lessen the occurrence of this casualty. The dreadful attack of convulsions may chiefly be assigned to young, plethoric females, in their first labours, sometimes immediately after delivery, sometimes in the course of a few hours, and even at the distance of some days from that event. The Princess Charlotte, whose lamented death paralysed the whole nation, died almost directly after her delivery, but had the efforts that were made to *bleed* her a few days before proved successful, I feel confident that she would have been safe;* and it is to this precautionary mode of treatment that I would, and do, always submit plethoric young women, as a necessary preparation for those terrible exertions of the muscular powers which they are about to undergo (in a recumbent posture, too), whereby the vessels of the brain are urged and extended beyond their proper tone, and to the utmost stretch of their endurance.

That these tender tubes should sometimes give way, will astonish no one who has witnessed the turgescence of the features of the face and neck, the swelling veins and beating temples of the sufferer, in long protracted labours, and which, if succeeded by a shivering fit, strikes the heart of the experienced practitioner with the dismal conviction that lesion has indeed taken place. *Then* he feels that he ought to have lightened the vascular system in due time,—that he ought to have removed every fœcal impediment to the process of nature; that he ought to have moderated those violent exertions which the injudicious importunity of female attendance is ever so forward to urge, and to have raised the head from that recumbent posture in which gravitation alone has given some effect to the impetus of the circulation; but it will now be too late; *a ruptured vessel* within the cavity of the skull has no remedy; but a gradual, or perhaps a rapid, succession of convulsive symptoms, according to the size of the injured vessel, will certainly supervene. Yet I shall be told, "This is an accident. It has no connection with the generative system. It is never alluded to by lecturers or books on the subject of midwifery; nor has any examination of the brain in such cases been made." An accident, indeed, it is, as fatal as it is frequent, but, like all other accidents which may be prevented by a little foresight, it is a very fit object of judicial investigation. I am, Sir, your obedient servant,

T. W. C. PERFECT.

Hammersmith, Sept. 30.

* The Princess Charlotte was punctured in both arms, in an ineffectual attempt to bleed her, while at Claremont, a few days before her confinement.

THE JULY EXAMINATIONS AT THE UNIVERSITY OF LONDON.

To the Editor of THE LANCET.

SIR:—The remarks of your correspondent "A LATE CANDIDATE, &c." (Sept. 14) are very important. I have felt all along that the arrangement of candidates was owing to Dr. Roget, and, could I with propriety tell all I know, I think I should convince your readers that this remarkable division of the candidates *lies at his door, and* HIS ALONE.

I do not wish at present to examine the motives for this extraordinary step, but write just to point out two absurdities in the London University regulations, one *resulting from* the division, one leading to it. We may take it for granted that the depression of some of the candidates has been owing to supposed *or reputed* inferiority in comparative anatomy;* and, according to

* It seems that this most discreditable shuffling of the Examiners will not end until they have run a complete round of excuses. First, there was no deficiency on the part of the candidates, but the division was a "mistake" a "great injustice;" then was urged the absence of an examination in *Latin*. Then it was not fair to Mr. Taylor to put them all in the first division! Next, the candidates were not all of them sufficiently acquainted with *medical jurisprudence*. Now it seems that an inferiority in *comparative anatomy* is whispered against them. Is not there one examiner among the lot who is manly enough to do these young men the justice of saying which of these allegations, or what other, is true?

the regulations, the punishment is—more *hospital practice* or more *private practice!* Why should not each candidate be told in what he is deficient, and recommended to attend to the weak point?

The other absurdity is the limitation of age. In the first examination nine of us were in the first rank, and of these one only was eligible for honours, all the others being too old. If he had obtained them, all the other candidates would have suffered in their reputation, and he would have stood, as Dr. Taylor now stands, "alone in his glory." Why should not some mark be attached to the names of all who are too old for honours? And why should not the Examiners have the power of attaching some mark of honour to any one who may seem particularly to deserve it?

Believing that your correspondent has got to the bottom of the matter, I think some regulation of this kind, by which Mr. Taylor might have stood out as he deserved, would have prevented all these heartburnings. I felt very indignant at Dr. Roget's demand of *my age*, and was very much disposed to tell him at the time that it was no business of his.

I fear that your correspondent's proposition for an address from students in general, will meet with little attention among the crowd of other matters that at present occupy their minds, but if any one of the eight, who has leisure, will call a meeting of them (their addresses may be easily got at their respective schools) to talk over matters, and to consider the propriety of an address from *them* to the Board (taking care that Mr. Rothman does not get hold of it), I shall be most happy to join, and share in any expense. I am, Sir, your obedient servant,

ANOTHER UNFORTUNATE M.B.

London, Sept 25, 1839.

P.S. It would not be amiss to append an address for the removal of the uncivil Registrar, for the University ought not to give 600*l.* per annum to a man so devoid of courtesy and good feeling.

*** The name of our correspondent was transmitted with his letter.

TETANUS FROM COLD.

To the Editor of THE LANCET.

SIR:—If the following notes be thought worthy a place in your valuable Journal you will much oblige me by inserting them.

Your obedient servant,

D. H. CLARE, Surgeon.

Newcastle-on-Tyne, Sept. 22, 1839.

On the night of January 25th, 1839, I was sent to see Mrs. C., who was residing about twelve miles in the country, and reported to be suffering severely from an attack of rheumatism in the neck and face. I learned that, previous to this attack, she had been much exposed to cold. The weather being extremely severe, she had been in the country, and had ridden about seven miles during the preceding day.

She was suddenly seized (whilst turning in bed) with a severe pain in the shoulder, extending up the neck. This continued to increase until the evening following, when it became extremely severe, extending to the face, the back of the neck, and over the shoulders, drawing the head involuntarily backwards, which caused her to cry out when the pain came on. About this time she began to feel some difficulty in opening her mouth. Alarmed at this latter circumstance, she sent for medical aid. The symptoms, on my arrival, were violent spasms of the muscles of the neck, back, and face, but not so violent as they had been, owing to a copious perspiration which took place, and still continued. The jaw capable of being opened but a little way, speaking brought on the spasm. She could not bear the least motion; pulse quick; bowels confined; the perspiration to be encouraged, and the following medicine ordered:—

Castor oil, one ounce;

Tincture of rhubarb, two drachms. A draught to be taken at once.

Solut. of acet. of ammonia, three ounces.

Tart. antimony, one grain.

Water, five ounces.

Syrup, half an ounce; two spoonfuls, every second hour.

Opium, ten grains;

Conserve of roses, enough to make nine pills; take one.

Draught has operated, and to take one every two hours, and to rub the parts with the following liniment:—

Tincture of colchicum, half an ounce.

Soap liniment, one ounce.

Tincture of opium, half an ounce.

26. To-day she was nearly free from pain, she had perspired freely; the purgative had operated very well, procuring about four copious stools, in consequence of which, conceiving the pills also to be purgative, she had not taken any.—The draught to be repeated; to continue the mixture, and to take a pill each night. She was not visited again, but I was informed soon after that she recovered well. I omitted to mention, in the proper place, that the shoulders and neck were ordered to be fomented with flannels rung out of warm water.

In the "Medical Repository," No. 1, under the title of "Medical Transactions of the Royal College of Physicians," Vol. IV., there is a review of some cases of tetanus published by Dr. Latham, successfully treated by what he terms "a relaxant and sedative plan." The Dover's powder was principally used, given frequently in small

doses; and it is also mentioned that the bowels were kept open with castor oil, administered repeatedly. Dr. Latham gives the whole credit of the cures to the opiate, whilst the reviewer considers the beneficial effects to have arisen from the effects of the purgative. In support of this opinion there is another paper, in No. 3 of the same publication, under the head of "Dickinson on Tetanus," in which Mr. Dickinson, a surgeon in the West Indies, who has had ample opportunity of seeing this disease, and contrasting the success of the different modes of treatment, is decidedly in favour of the purgative plan. Calomel, jalap, and castor oil, and the neutral salts, are the medicines he employs, given so as to procure five or six stools daily, until the symptoms yield; this plan has not only proved successful in tetanus from cold, but also in tetanus from wounds. In confirmation of the efficacy of the purgative plan, I think the above case of Mrs. C.'s is another proof. She expressed particular relief from the operation of the cathartic; it is also to be remembered that no opium was given from the mistaken opinion respecting the pills. I would not, however, overlook the diaphoretic and liniment, which, doubtless, were also beneficial; and from which circumstance, in a similar case, I would endeavour to secure the effects of both.

It is to be noticed, that with respect to this patient's state of health previous to the attack, it was impaired; I found she was the subject of severe dyspeptic complaints, which I conceived to have originated in diseased liver. Reflecting upon these circumstances in connection with the well authenticated fact, that hydrocephalus is frequently produced by the disordered state of the abdominal viscera, I would ask whether or no such a state of these viscera may not have predisposed to tetanus.

THE ABORTIVE APOTHECARIES' ACT.

To the Editor of THE LANCET.

SIR:—The recent trial in Lancashire has shown to the profession what has, it seems, been overlooked by the many, though well known to yourself and to some general practioners, namely, that the Apothecaries' Act is a statute in favour of the chemist and druggist, and capable of affording little or no protection to the apothecary. It could not be expected to prove otherwise, on considering who were the concocters of that stupid piece of legislation, and to whom, a body of mere pill-makers, wholesale and retail, its powers were to be confided. Had the Act been framed to protect the *apothecary* in the exercise of his profession, it would have levelled the shop in Union-street, whose proprietors could not shield their own private interests without virtually recognising those of their *fellow chemists and druggists* in Holborn, Plough-court, and elsewhere. They gulled the public by professing to make the apothecary respectable—to "elevate" the the scale, labour, and expense of his education and admission into the profession, and, at the same time, legalising the right of the chemist and druggist to undermine him,—making the apothecary the amateur, a medical philosopher, and transferring the *emolument* to the druggist. The Act allows the chemist and druggist not only to prepare and compound, but to dispense medicines; and as to the assertion that it prevents the druggist from calling to ask "how his patient is," is palpably false. No man, whether he be druggist or dustman, is prohibited by law from visiting his sick neighbour, and recommending him a basoa of gruel, a glass of wine, or a cup of rhubarb. Moreover, in many cases, the medicines are ordered by the patient. The druggist has only to propose certain medicines to the patient, and the patient himself orders them to be sent. The framers of the Act must know that the druggist, to whom the *dispensing of medicine* now *legally* belongs, cannot, by that Act, be prevented from practising as an apothecary. For any one who wishes to take the benefit of the Act without passing an examination, and receiving the licence of the Company, has only to write over his door "Chemist and Druggist," and he is safe.

Every apothecary in the kingdom should be ready to sign a proper petition to the Legislature on the subject of a reform in medical law; and I hope, Sir, you will hit upon something for our relief, for we are starved out by the present Act. I am, Sir, yours,

A POOR APOTHECARY.

London, Sept. 21, 1839.

PSEUDO-BOA FASCIATA.

To the Editor of THE LANCET.

SIR:—May I beg a corner in this week's LANCET to correct an error in the heading of my letter to Mr. Corbyn? My only reason for requesting the insertion of the case alluded to was, that Mr. C. might be informed of the *proper* name of the reptile, which in the LANCET of September 21st is erroneously termed the rattlesnake:—It is the pseudo-boa fasciata, and it will readily be observed that Dr. Stephenson's description of that snake differs widely from the following representation of the rattlesnake, which is from Millin's popular Natural History.

"Le Crotalus (Rattlesnake). Ce genre ressemble au boa; il se distingue par les pièces

coniques de l'extrémité de sa quene, qu'on nomme *sonnettes*. Le coiquira se nomme particulièrement *serpent á sonnette*, á cause des anneaux mobiles, espèce de grelots qu'il porte au bout de sa quene, et qui avertissent de sa dangereuse approche. On le trouve en Amerique."

I have frequently seen the celebrated Indian jugglers, but do not remember ever to have observed the rattlesnake in their collections. It is my impression, that it is seldom, *if ever*, seen in India; but is generally to be met with in the southern latitudes of America.

J. G. BRIGHTON, Surgeon.

Kinver, Staffordshire.

STATISTICS.

POPULATION OF FRANCE.

THE total number of births in Paris, during the year 1837. was 29,192; or, 14,651 boys and 14,541 girls. Of the number born, no less than 9,578, or nearly one-third, were born out of wedlock. The number of deaths amounted to 28,134. There died—at home, 17,127 persons; in hospital, 10,604; in prison, 99; while 304 bodies were deposited at the Morgue.

Hence of every *five* persons who die in Paris, only *three* have the satisfaction of dying in bed.

The number of deaths from small-pox, out of a population of 774,338, amounted to 458; in the year 1836, it was only 227.

The proportion of males to females born is as 17 to 16; but of children born out of wedlock, the proportion is as 24 to 23.

As there is one birth for every 32.7 inhabitants, if we suppose the population to remain nearly stationary, the mean duration of life is expressed by 32.7 years. Before the Revolution, it was only 28.75.—*French Lancet*, Sept. 10, 1839.

PRISON MORTALITY IN FRANCE.

From 1815 to 1818, the general mortality of the prisons in Paris was one death for every 12.01 prisoners; from 1819 to 1825, the mortality was reduced to one in 15.30. In the other prisons of the kingdom the general mortality was one in 20.9.

In the places where galley slaves are confined, the mortality from 1816 to 1827 was as follows:—

Rochefort.....	1 in 11.51.
Toulon	1 in 20.55.
Brest.....	1 in 27.06

French Med. Gazette, Sept. 21, 1839.

A GREEK OKEYISM.

WE recommend the following "authentic" facts to the notice of the deluded Showman in Conduit-street:—

Early in August last two young Greek girls landed at Marseilles from Smyrna. According to the testimony of credible witnesses they were endowed with electrical properties of the most wonderful nature. Immediately on their arrival they were visited by a crowd of spectators, including many learned men and *professors*, who assured themselves of the existence of the following phenomena. The girls were placed at either extremity of a large table, but distant from it by one or two feet, according to the intensity of the electric power with which they were at the time imbued. After the lapse of a few minutes a crackling noise was heard, similar to that produced by the passage of the electric fluid through the leaves of gilt paper; the table seemed to receive a sudden shock, and then gradually moved from the elder towards the younger sister. A nail, a key, or any piece of iron placed upon the table, immediately arrested its mysterious movement. The experiments were varied in different ways, but the facts observed were always consistent with the laws of electricity. Thus when glass isolators were employed, or when one of the sisters was clothed in silk, the electrical influence was immediately neutralised. A professor who was present at these experiments declared that on one occasion he mounted up on the table, which continued to move (though more slowly) notwithstanding his weight.—*Journal des Debats*, Sept. 19, 1839.

ADULTERATION OF BARK.

THE present high price of cinchona bark has given rise, in France, to an adulteration to which we think right to direct attention, as, from a similar reason, it may probably be attempted in this country:—

The bark employed in the adulteration is the cinchona ovata, and a considerable quantity has been sold to the central depôt of the Parisian hospitals. On being analysed by M. Bouchardat it was found to contain a peculiar crystallisable principle, but neither quinine nor cinchonine. The cinchona ovata may be recognised by the following characters:—It is of a greyish colour, mixed with pale yellow, the internal surface of the bark being dark and constantly dirty looking; it is much lighter than the true barks, and its form is that of a *tube*, from two lines to an inch in diameter, without any admixture of flat bark with it. —*French Lancet*, Sept. 21, 1839.

SCROFULOUS OPHTHALMIA.

CONIUM MACULATUM.

Dr. Kopp, of Hanau, recommends strongly the conium maculatum in the treatment of scrofulous ophthalmia. His formula is,

Extract of conium, one drachm;

Cinnamon water, four drachms. Dissolve.

To children of from two to three years of age, and upwards, he gives four drops of this solution, thrice a day, gradually increasing the dose by one drop. Professor Otto, of Copenhagen, says that he has cured more than thirty cases of scrofulous ophthalmia in this manner. Blisters behind the ears, and compresses dipped in an opiate lotion, were employed at the same time. The dose was increased to thirty-five drops a day, without producing any unpleasant effect.—*Arch. Gen. de Med.* Sept. 1839.

CORONER'S INQUEST.

To the Editor of The Lancet.

Sir:—In the "Times" of this morning I observe that an inquest was held before Mr. Manning, the Coroner, on the body of an individual named Simkins, who died suddenly, and, as it appeared from the evidence of the surgeon, from the bursting of a blood-vessel.

Mrs. Simkins, the widow of the deceased, stated in evidence, that he was subject to attacks of the gout, for which he took medicines, which *she believed* "*destroyed his inside*," and that a blister had been applied to his chest. The Jury returned a verdict of "Died by the visitation of God."

Now, for my part, I do not understand the meaning of such a verdict as this under any circumstances, but in this instance I think it was most decidedly an improper one. I am not a medical man, and am, therefore, ignorant of the causes which may produce bursting of the blood-vessels; but may it not in some instances arise from injudicious medical treatment, as there was no evidence to prove that it was not so in the example quoted? At all events, Mr. Editor, I appeal to you, as a medical Coroner, whether there were not sufficient grounds for inquiry as to the nature of the medical treatment of the deceased in the instance before us.

I shall not apologise for making this communication, on a subject which evidently involves considerations of great importance to the public, whose interests I know you are always ready to uphold. Yours, &c.

An Observer.

Oct. 1, 1839.

PRIVATE TEACHERS OF MEDICINE.

To the names of private teachers mentioned in our last Number, we have been requested to add those of Mr. Scoffern, of No. 26, King's-square, and of Mr. Leach, who gives private instruction in the classics at No. 35, Great Queen-street, Lincoln's-inn.

ARTESIAN WELL AT GRENELLE.

The boring for an Artesian well in the plain of Grenelle has already been carried to a depth of 483 metres without arriving at a source of water. It has, however, been discovered that the temperature increases one degree for every 39 metres of depth, and it is hence probable, that when water does ascend it will be at the temperature of a warm bath.

BOOKS RECEIVED.

The Cyclopœdia of Anatomy and Physiology, Part XVIII. Sherwood and Co., London.

A Dictionary of Materia Medica and Practical Pharmacy, by William Thomas Brande. Parker, London, 1839. 8vo. pp. 588.

Narrative of the Discoveries of Sir C. Bell in the Nervous System, by Alexander Shaw. Longman and Co., London, 1839. 8vo, pp. 232.

Documents and Dates of Modern Discoveries in the Nervous System. Churchill, London, 1839.

TO CORRESPONDENTS.

Medicus. The French Academy have made three reports; twice unfavourably, once doubtfully.

The paper on iodide of arsenic will be found in The Lancet of October 27, 1838.

W. K. R. It is contrary to our practice in this Journal to reply to such questions. We are not aware that any reason exists for holding either party in esteem as a "rectum doctor."

Mr. Thurnam's Report has been received.

A General Practitioner has our interpretation of the law before him. It would be useless to repeat the opinion in a specific answer to his question.

J. E. W. must form his own judgment on the course that he should pursue. He has as much of material before him whereon to decide, as he can at present possess.

Alpha. No. The piece of plate has not yet been presented to the illustrious author of "Prostitution," from the ladies of Shire-lane, but the worthy Professor, it is said, will be introduced by an accommodating "President," at the next drawing-room, for the purpose of presenting his book to the Queen.

Non-medical. To answer satisfactorily the questions proposed by our correspondent, we should be compelled to write a complete history of gonorrhœa and its complications.